Trains

June
1943

25¢

32 BILLION PARTS WORKING HARDER THAN EVER BEFORE
RIGHT OF WAY FOR THE U. S. A.
Do you know that the cars which the railroads deliver every day just to military camps and plants would make a freight train 150 miles long?
And that to handle troop movements takes more than 200 special trains a day?
This is something to remember when trains are held up to make way for victory freight, or cars are crowded, or reservations hard to get.

Maybe this will give you an idea of what the railroads are up against –

There are 32 *billion* parts in all the cars and locomotives now in service – 32 billion parts that have to work together and hold together to keep America's wartime traffic rolling.

And no matter how much we need new equipment – the hard fact is that all the material we can get today cannot add up to much against such a total.

So the job confronting the railroads is the same confronting most Americans – the job of doing the best it is humanly possible to do with what we have and can get.

It's a fortunate thing, under the circumstances, that the American railroads worked out in peacetime the teamwork they're putting to such good use today. Any freight car in America can be repaired in any railroad shop in America – wherever it happens to be – without the delay of getting back to "home base."

This is only one example of the cooperation among the nation's railroads, and of the broader cooperation among railroads, shippers and the government – all working together and pulling together to handle the biggest transportation job the world has ever seen.

ASSOCIATION OF AMERICAN RAILROADS

ALL UNITED FOR VICTORY

June, 1943

TEN years ago the Century of Progress Exposition opened in Chicago and we marveled at exhibits of cars and trains of the future. Just how fast that future has come and gone can be realized by thinking back to those exhibits. The ultra-modern cars shown then have been far surpassed in less than the 10 years. The Diesel-electric locomotive, such an accomplished fact now, was then but a new experiment. Disk brakes, hydraulic shock absorbers, and tight-lock couplers were nearly unknown then, and now any new mainline passenger equipment is almost certain to incorporate all three. Air-conditioning was then a novelty. The Pullman Company attracted attention with an all-aluminum observation car, forecasting the thousands of cars built since with lightweight materials and new engineering concepts. The railroads have indeed progressed in 10 years!

Vacation at home this year. You'll be pleasantly surprised at how much you can see and explore right in your own city.

Another look backward is at the government operation of the railroads 25 years ago. In 1918, when the government was running the railroads, taxes were raised a mere 10 million dollars. Last year, with private operation, the government increased railroad taxes 655 million dollars. The comparative increases in freight traffic, passenger traffic, and operating expenses are:

	1918	1942
Freight traffic	3%	34½%
Passenger traffic	8%	83 %
Operating exp.	40%	26 %

Because of these showings the railroads of 25 years ago under government operation were allowed a billion-dollar-a-year rate raise; the privately operated railroads of today have just been handed a ⅓-billion-dollar-a-year rate reduction.

If you MUST travel, go in the middle of the week. Ask a railroad traffic man what's the least crowded train.

Paper rationing caught up with us, and *Trains* has eight pages less this time as a temporary measure to adjust for newsdealer distribution which we couldn't cut soon enough. We've done some typographical redesigning, however, which gets almost as much into the smaller number of pages, and this improvement will be permanent. The full-color plate in the center of the magazine is a bonus.

Transportation has finally been recognized as an essential war industry with President Roosevelt's appointment of Joseph B. Eastman as a member of the W. P. B.

Waste of manpower in the railroad industry was charged by George P. McNear Jr., president of the TP&W, in recent testimony before the House Military Affairs Committee. McNear has been an advocate of working rules geared to higher per-man production, with higher pay. He charges that the railroads could be operated efficiently with fewer men if certain working rules were revised with efficiency in mind, and introduced testimony showing more favorable per-man productivity on his TP&W under his own working rules than under standard rules.

The Pullman Company has announced that after the war it will build duplex-roomette sleeping cars in quantity.

A postwar improvement program including 141 miles of additional electrification, easier curves, heavier rails, more double-deck M. U. cars, smoother starting and stopping and other improvements for present cars, and purchase of new motor and trailer cars, has been announced by the Long Island Railroad in full-page newspaper ads. But the railroad emphasizes that these improvements can only be made if an adequate return is assured by relief from local property taxes and by proper commutation fares.

A. C. Kalmbach.

Trains

Volume 3 Number 8

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ANNUAL SUBSCRIPTION, DIRECT BY MAIL, $2.50 in U. S. A., Central, and South America; $3.00 elsewhere.

Entered as second-class matter Oct. 11, 1940, at the post-office at Milwaukee, Wis., under the Act of March 3, 1879.

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PUBLISHED MONTHLY BY KALMBACH PUBLISHING CO.
1027 N. 7th St. Milwaukee, Wis., U. S. A.

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All photos by Peter Stewart, Dallas, Te

Texas Trains

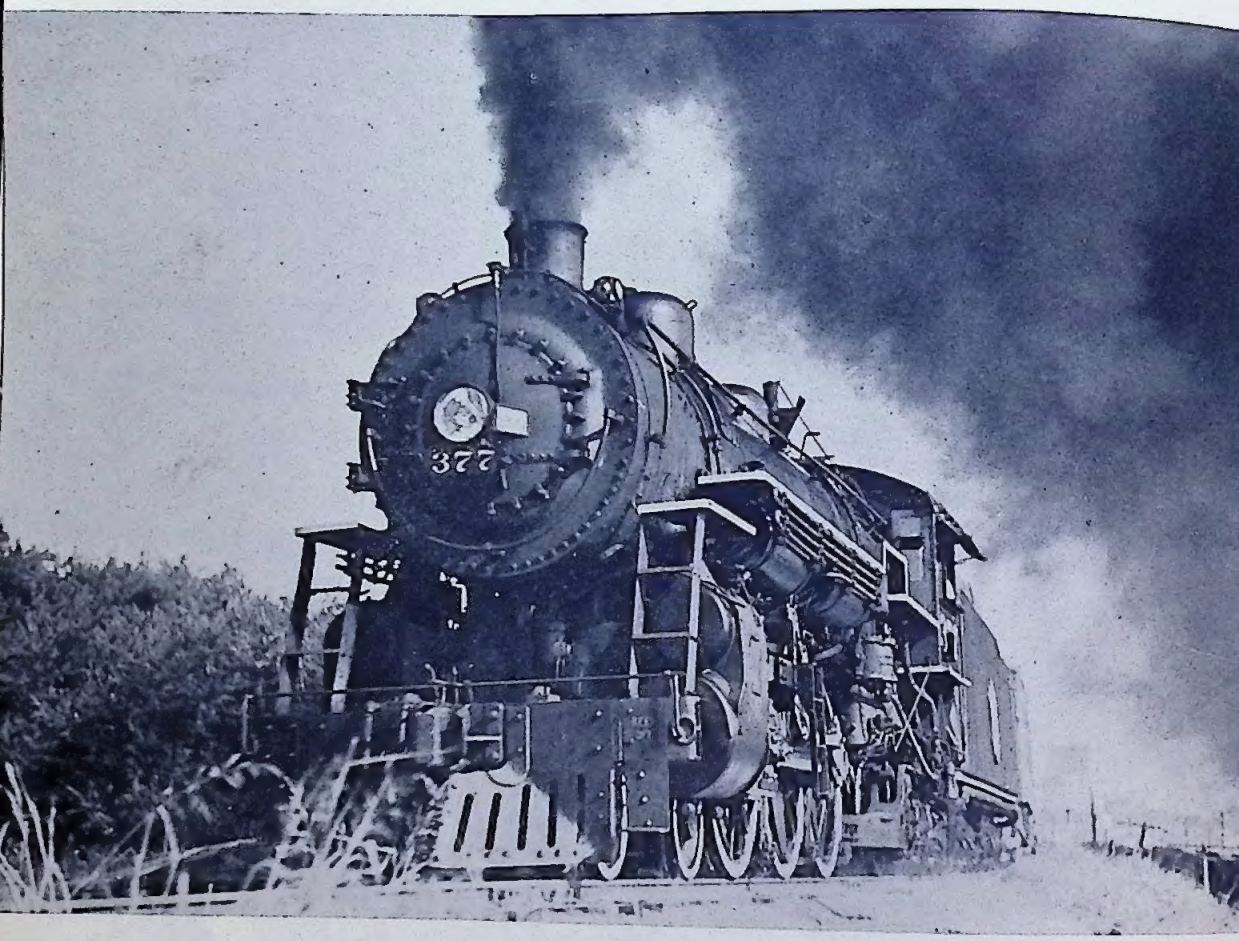
A little glimpse of a big state.

THE classic about Texas is of the Chicago sales manager who called his salesman in El Paso and asked him to run over to Texarkana and take care of a call. The salesman replied, "Send someone from Chicago; it's closer." And indeed it is. From Chicago to Texarkana, Tex., is 777.3 rail miles; across Texas from Texarkana to El Paso is 839.1 rail miles. It is not surprising that such a huge state should have more miles of railroad route than any other.

Texas is a crossroads of the Western trade routes, a land of east and west transcontinentals and north and south lines carrying the rich products of a naturally rich state. It is a land of great distances and endless plains. But Texas also has its cities, centers like Dallas, served by 10 railroads spoking out in all directions; its twin city, Fort Worth, with nine railroads; historic San Antonio, modern Houston, and that important transcontinental rail gateway, El Paso.

The *Texas Special* surges into Dallas (opposite page) from St. Louis over the combination route set up by the Frisco and the Missouri-Kansas-Texas especially for this through traffic. Here at Dallas the train is on Katy rails, behind Katy power, but from St. Louis to Oklahoma it is on Frisco rails. The *Special* continues on south through Waco and Houston to Galveston on the Gulf of Mexico. The photo on this page shows the *Texas Special* heading northward out of Dallas with a Texas industrial skyline behind.

Across the waist of Texas for nearly 1000 miles lies the Sunset Route of the Southern Pacific, here called corporately the Texas & New Orleans. A little farther north is the Texas & Pacific, also connecting El Paso with



New Orleans. The construction of these two roads in the early 1880's was a classic race for rich objectives that almost matched the famous contest between the Central Pacific and the Union Pacific. Both roads wanted the one pass in the mountains southeast of El Paso. The SP won, but by agreement both roads use the line between Sierra Blanca and El Paso. The T&P was built by the energetic Tom Scott, at the same time fourth president of the Pennsylvania Railroad and one of the really great railroad men of this country. Scott died within the year before completion of the T&P, and it was taken over by Jay Gould. The SP was, of course, being built by the California Big Four, headed by Collis P. Huntington, and thus the battle for a railroad across Texas was indeed a struggle of titans.

In addition to the Frisco and the Katy (whose *Bluebonnet* to St. Louis is shown above), the Missouri Pacific (whose *Sunshine Special* from St. Louis to Texas, Mexico, and California is shown on page 7 at Austin) and the Cotton Belt (St. Louis-Southwestern) invade Texas from the northeast, while the Rock Island, the Santa Fe, and the Kansas City Southern-Louisiana & Arkansas come down from the north. The Burlington System (Fort Worth & Denver City) strikes in from the northwest, carrying Rio Grande grapefruit and Texas oil up to the Rocky Mountain country. The Santa Fe's alternate main line from Chicago to the West Coast cuts across northern Texas through Amarillo.

It is not only the traffic across Texas and from and into other states which these railroads carry, but also the export and import freight of Texas' ports, chiefly Galveston and Houston. This relatively inland state does, after all, have nearly 1000 miles of Gulf Coast

shoreline, and so much cotton and oil move to foreign countries directly from its ports that it has in some years ranked first in the country in exports.

By a quirk of Texas law, all railroads within the state must be owned by Texas corporations. Thus the state line is dotted with small towns and cities which attain a statistical importance because they are the terminal points of railroads, but the trains breeze right through. By operating agreements the Texas railroads are integral parts of the larger systems which own and control them. Thus the Rock Island in Texas is the Chicago, Rock Island & Gulf, the Santa Fe is the Gulf, Colorado & Santa Fe, the Missouri Pacific is the International Great Northern and the New Orleans, Texas & Mexico, and so on.

In the shadow of the oil derricks it is not striking that Texas railroads carry little coal, contrary to the countrywide average of more than one-fifth of all railroad freight revenues. But they do carry cattle and grapefruit, grain and melons, cotton and manufactures—all the rich traffic of a state large enough to have once been a country in its own right.

First grade separation.

An overpass truss bridge carrying a highway over the B&O about 2¼ miles from Baltimore, completed in 1830, is believed to be the first railway-highway crossing separation in America. The bridge, which was built by Colonel Stephen H. Long, embodied a new engineering principle and was patented March 6, 1830.

Joseph P. Sadler, 1723 S. Court St., Montgomery, Ala.

Day trains between Atlanta and Montgomery.

No. 32, the daytime maid-of-all-work train from Montgomery to Atlanta, is shown above arriving in Milstead, where it will pick up the news butcher (right) who came down from Atlanta on Train 35. Below is No. 35 itself some three miles east of Montgomery.

Joseph P. Sadler.

West Point Route

★ Two medium-sized Southern railroads work together to form a link in important through route.

By Joseph P. Sadler.

"Gentlemen," President William Sayre of the newly formed Montgomery & Chattahoochee River Railroad Company was saying, "it is from Montgomery to West Point that we will build rather than from Montgomery to Columbus. Yes, sir, it will be the West Point Route for us." Montgomery is in Alabama; West Point and Columbus are on the Georgia side of the Chattahoochee River.

The year was 1832, when railroads were very, very new. A young engineer named Battle had just reported his survey for the new railroad, but instead of running his line to the Chattahoochee River at Columbus he reached the river some 20 miles upstream at West Point. Whether this was by accident or whether Battle wisely followed the natural topographical contours of the land we will never know.

President Sayre, however, had good foresight in going to West Point, for later another road, the Atlanta & La Grange, was projected and built from Atlanta toward West Point. While it was true that the prime factor in building a railroad at that time was to get the cotton to the nearest steamboat, Sayre no doubt foresaw the day when connecting railroads would form through routes to displace the steamboat as a common carrier.

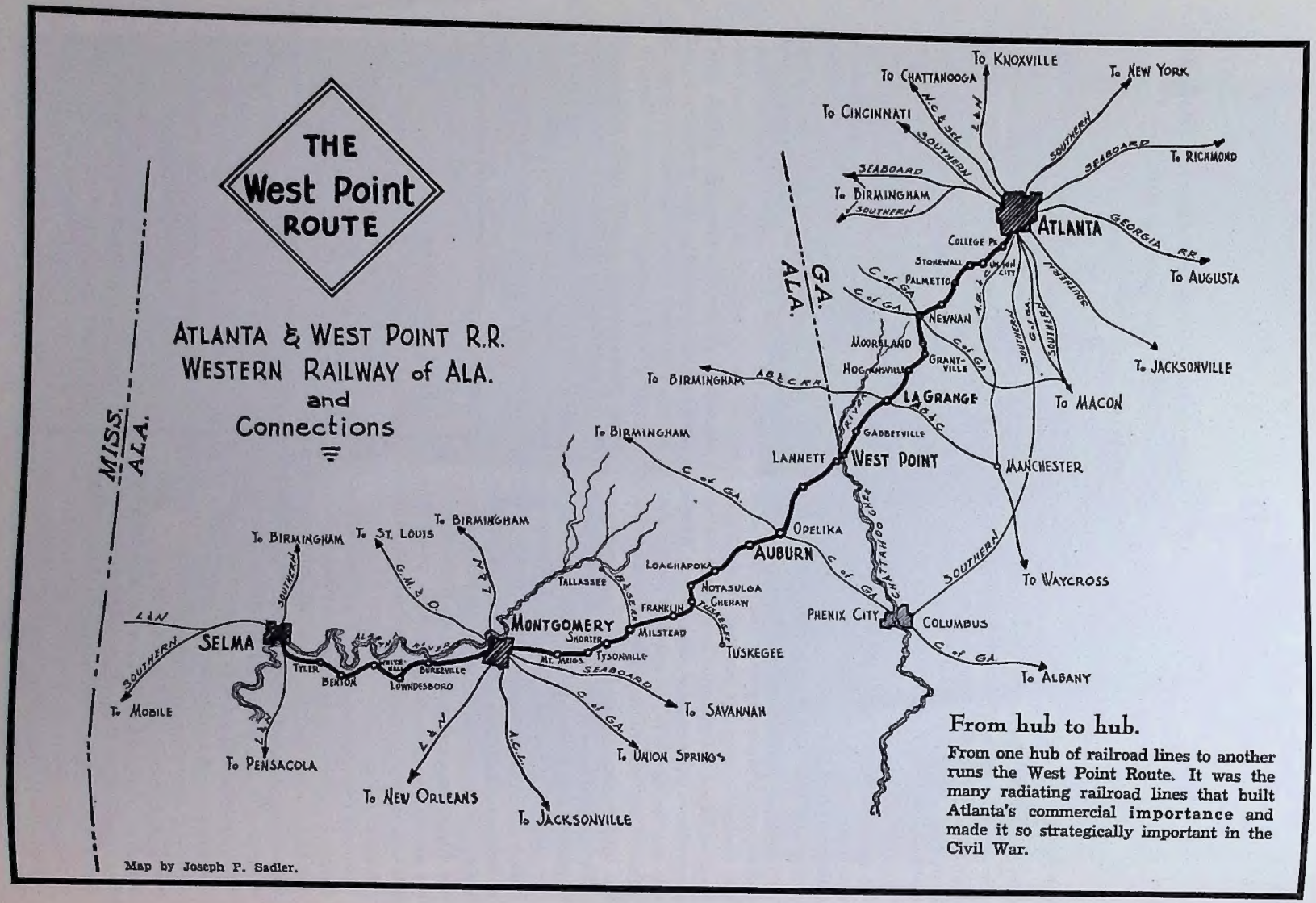
Today the successor to President Sayre's company is the Western of Alabama, which operates from Selma, west of Montgomery, through the capital city to West Point, where it joins with the Atlanta & West Point to form a jointly operated through line to Atlanta. This 225 miles of railroad forms an important link in a through route between the Eastern seaboard and New Orleans and the Southwest. Important passenger trains like the *Crescent Limited* come down from New York, Philadelphia and Washington over the Pennsylvania and the Southern to Atlanta, then over the West Point Route to Louisville & Nashville tracks to Mobile and New Orleans.

The importance of the WofA and A&WP as a bridge is shown by the fact that 90 per cent of the freight comes from connections and only 10 per cent originates on line. It is also shown by the fact that the West Point Route operates more passenger-train miles than freight. The passenger traffic of most short lines is relatively inconsequential, but in this case the mileage forms an integral part of a well traveled route.

The same officials and the same organization run both the Atlanta & West Point and the Western of Albama. All engines of both roads carry on their cabs a little diamond-shaped monogram with the words "The West Point Route" neatly lettered within. This joint rolling stock includes 47 locomotives (30 of which were built prior to 1920), 1093 freight cars, and 44 passenger cars. All of it is neatly kept up and attractively painted and lettered. The principal freight tonnage on both roads is soft coal. On the Atlanta & West Point the principal originating tonnage is manufactures and miscellaneous goods, while on the Western of Alabama the principal tonnage originated is sand and

First cowcatcher.

The cowcatcher, a distinctly American railway feature, was invented by Isaac Dripps, a young mechanical engineer employed by the Camden & Amboy in New Jersey (now part of the Pennsylvania Railroad). So many cows trespassed upon the railroad that Dripps installed on the front end of a locomotive a small truck supporting two iron spears. The Dripps device was effective, but fatal to the cows. Later he designed a cowcatcher on the order of an automobile bumper, and from this the present V-shaped cowcatcher was evolved.



Map by Joseph P. Sadler.

From hub to hub.

From one hub of railroad lines to another runs the West Point Route. It was the many radiating railroad lines that built Atlanta's commercial importance and made it so strategically important in the Civil War.

Joseph P. Sadler.

Football special.

A Western of Alabama special takes ten carloads of Auburn students to their annual football game at Montgomery. This particular special, running extra six miles east of Montgomery in 1938, is pulled by Engine 190, a Class P Pacific built by Lima in 1926.

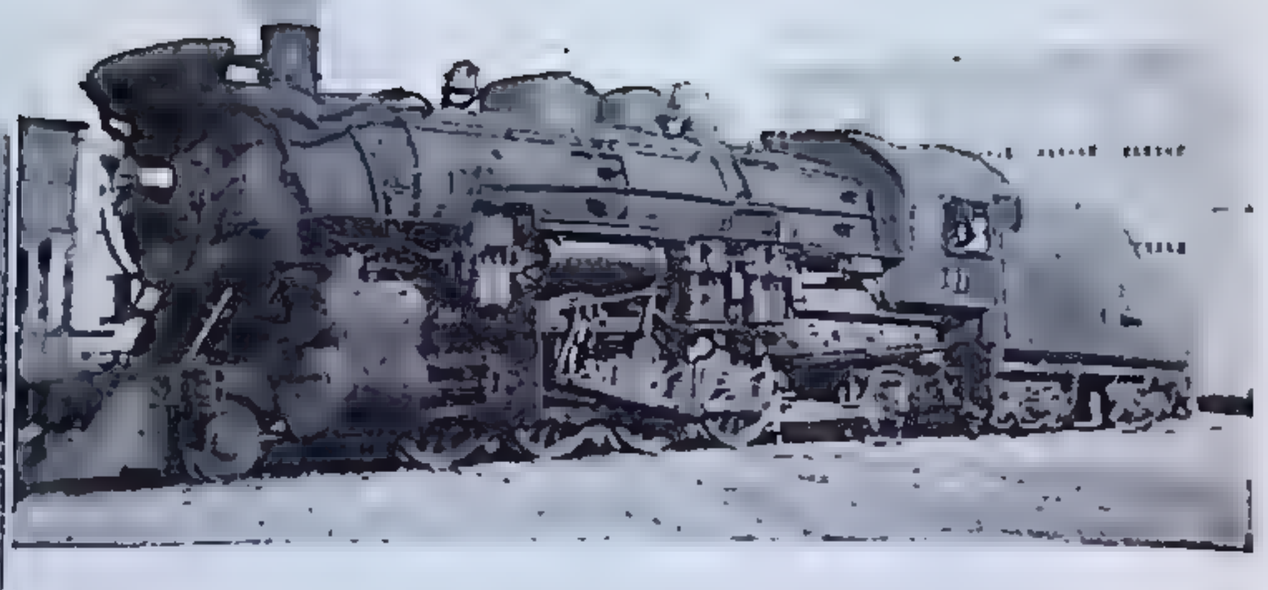
gravel. Other principal commodities handled are cotton in bales, oils, fertilizers, cement, and lumber.

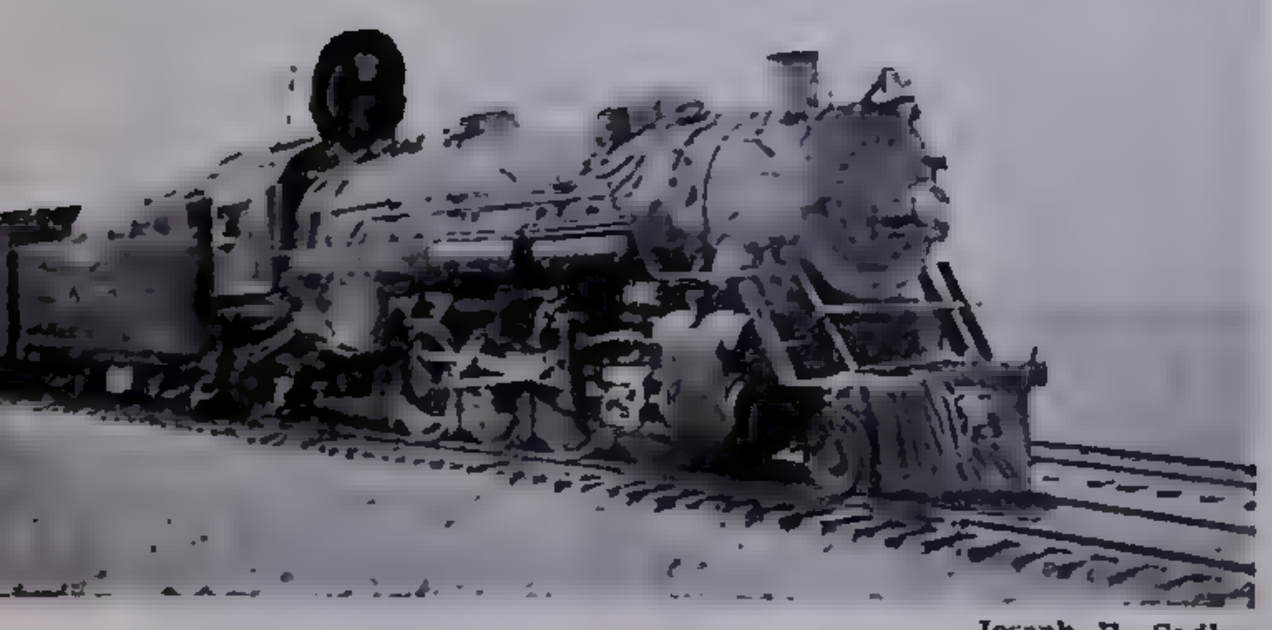
The Atlanta & West Point is controlled jointly by the Louisville & Nashville and the Atlantic Coast Line, while the Western of Alabama is controlled half by the Louisville & Nashville as trustee for itself and the Atlantic Coast Line, and half by the Central of Georgia, which is owned outright by the Illinois Central. At Atlanta the West Point Route connects with the small Georgia Railroad, which runs eastward to Augusta where it connects with the Atlantic Coast Line for various seaboard points.

The heavy limited trains are handled by either the Class P Pacifics numbered 190, 280, 281, and 290, or by the Class M 4-8-2 type locomotives, also used in freight service and acquired from the Florida East Coast. Local trains on the Montgomery-Atlanta Division and the four mixed trains on the Montgomery-Selma Division are pulled by 4-6-0's which are sometimes also used in local freight service. Most freight trains are pulled by Mikados and switching is done by either 0-6-0's or 0-8-0's.

The *Crescent* and *Piedmont* limiteds of today are carrying on a tradition of through Washington-New Orleans service over the West Point Route, a service which includes such famous predecessors as the Old 97 of song and story. In the shops and engine terminals along the line men still talk about how Sandy McDonald left Atlanta 1 hour 9 minutes late with the famous *Fast Mail* and made the run to Montgomery in 3 hours 33 minutes (present schedule of the *Crescent* is 3 hours 20 minutes) and how hogger John McWaters murdered time schedules on nightly runs with No. 97. It's a far cry from the little 4-4-0's of McWaters and McDonald to the giant 4-8-2's on the *Crescent* of today, and yet those men put the *Fast Mail* through on schedule and under difficulties to establish a common tradition of the post office and American railroading.

The Western of Alabama was originally chartered in 1832. Capital stock was set at one million dollars. The directors were empowered to borrow money, let the contracts and complete the road to the Chattahoochee River within 20 years, but nothing more was done until 1834, when a new company was formed and with a crew of 40 men the contracting firm of Scott & McGhee laid the first rails near Montgomery. By 1840, 34 miles had been completed to Franklin, and trains were operating—but, as one old fireman put it, "from no place to nowhere." The company understandably failed and was sold under foreclosure on July 6, 1842. Another company was formed as the Montgomery & West Point with a charter calling for completion to West Point not later than January 1,





Joseph P. Sadler.

Typical motive power.

Characteristic of West Point Route motive power are these five engines, four Atlanta & West Point and one Western of Alabama (bottom). Specification tables are on the opposite page.

1850. The work went steadily forward and, although the road was not actually completed until 1854, an uptrend of business caused an actual profit as early as 1851. In the meantime the Atlanta & La Grange Railroad had been incorporated in 1847 and after extension to West Point the name had been changed to the present Atlanta & West Point in 1857.

Once through trains were running between Atlanta and Montgomery, President Pollard of the Montgomery & West Point began to vision a road connecting Alabama's capital city with Selma, some 50 miles to the west. This extension would compete directly with steamers on the Alabama River, but Pollard knew that a railroad could do the job quicker and eventually at lower cost. This section of railroad traverses the heart of the black belt, the finest cotton-producing land in the country. It was chartered on February 23, 1860, but the Civil War halted all new construction and when the campaigns were over the railroads were faced with extensive rebuilding. The line to Selma was finally finished in 1870, and the great iron bridge across the Alabama was built two years later to bring trains into the heart of the city. The present company name, Western Railway of Alabama, was acquired during the reorganization in 1883.

The outlander in Montgomery may never have heard of Western Railway of Alabama, and even if he has, his picture of it from the statistics is of a small line. Not at all in keeping with this picture is the heavy, snappy-looking *Crescent Limited,* which he may see beating its way eastward out of the city in the early morning sun over 100-pound rail with block-signal protection. Here is a little railroad doing a big job as an important connecting link in one of the main lines of the American railroad system, a main line which is no less so because it is made up jointly by a number of different companies.

Locomotives of the Western of Alabama.

No.	Type	Class	Driver Diam.	Steam Pressure, Pounds	Cylinders, D. and S.	Tractive Effort, Pounds	Builder	Date
100								
101	0-6-0	E	52"	180	19" x 24"	25,490	Rogers	1907-08
102								
103, 104								
105	0-6-0	E	52"	180	19" x 24"	25,490	Alco	1910
115	0-8-0	G	51"	175	25" x 28"	51,200	Alco	1918
127								
128	4-6-0	A	61"	200	21" x 28"	34,400	Rogers	1904
129								
130								
131	4-6-0	A	61"	200	21" x 28"	34,400	Alco	1911
161								
175	4-6-0	A	72"	200	22" x 28"	32,000	Rebuilt	1924
190	4-6-2	P	73"	200	27" x 28"	47,500	Lima	1926
180								
181	4-8-2	M	69"	190	27" x 28"	47,800	Schenec	1924
185								
186								
187	4-8-2	M	73"	200	26" x 28"	44,179	Schenec	1924
375								
376								
377								
378	2-8-2	F	63"	200	26" x 30"	54,700	Lima	1923

The famous old Civil War engine *Texas* is said to have been owned by the WofA and is on exhibition at the Cyclorama Building in Grant Park, Atlanta, but nothing could be found about it in the history of the road.

Locomotives of the Atlanta & West Point.

No.	Type	Class	Driver Diam.	Steam Pressure, Pounds	Cylinders, D. and S.	Tractive Effort, Pounds	Builder	Date
200								
201								
202	0-6-0	E	52"	180	19" x 24"	24,400	Alco	1912
215	0-8-0	G	51"	175	25" x 28"	51,200	Alco	1918
225, 226								
228, 229								
230	4-6-0	A	61"	200	21" x 28"	34,400	Rogers	1903-07
261	4-6-0	A	72"	200	22" x 28"	32,000	Rebuilt	1924
273, 275	4-6-0	A	72"	200	21" x 26"	27,172	Rebuilt	1924
290	4-6-2	P	73"	200	27" x 28"	47,500	Lima	1926
280, 281	4-6-2	P	73"	200	24" x 28"	37,600	Alco	1913
350, 351								
425, 426, 427	2-8-2	F	63"	200	26" x 30"	54,700	Lima	1923
400, 401	2-8-2	F	63"	180	27" x 30"	53,100	Lima	1918

Notice that all WofA engines are numbered in the 100 series except the 2-8-2's, which were once A&WP jobs. All the A&WP motive power is numbered in the 200 series except the 2-8-2's. The shops treat all motive power alike, and all engines are gone over after each run and polished until they shine like new. The heavy Pacifics' black sides seem to stand out more than the others since they have a copper pipe running the length of the boiler and it shines like the bronze doors of a government building.

Philadelphia & Reading multiple-unit equipment.

The Multiple-Unit Electric Train

By A. C. Kalmbach.

FRANK J. SPRAGUE started something when he invented multiple-unit control of electric cars in 1896. A powerful electric car can pull a number of trailers, just as a locomotive pulls motorless cars, but Sprague's invention made it possible to make up trains with motors under every car, all controlled simultaneously from the cab in the front car. Thus was sufficient power smoothly applied to trains of varying length, and thus began the era of high-speed mass transportation by suburban and rapid-transit electric railroads.

The electric multiple-unit train is better suited than any other means of propulsion to suburban business with its frequent stops. An extra car added to a locomotive increases the load and slows down the schedule, but an extra motor car added to a multiple-unit train adds to the power in proportion and the schedule stays the same. So sensible does this idea seem —and yet when Mr. Sprague proposed it to the New York Elevated in 1896 it was turned down, and it was not until the following year that he finally put it into operation for the first time on the Chicago Elevated.

To the steam railroads, suburban service has always been a problem. The steam locomotive is at minimum horsepower in starting and its horsepower builds up as it attains speed, whereas the electric car, because of its control, maintains a more nearly uniform horsepower output over the entire speed range. It was not surprising that once the practicality of multiple-unit control was proved, many a railroad with heavy suburban service turned to electrification as the solution.

On the interurban lines, too, multiple-unit control was quickly and widely adopted. It permitted operation in trains, which economically justified the capital expenditure for tracks, power distribution and power supply. Significantly, most of the interurban lines with enough business to justify consistent multiple-unit train operation are still doing business, while the lines which ran predominantly single-car service have been replaced by buses. After all, is a single-car interurban much different (from the customers' standpoint) from the bus, and if not, why the expensive track unless it can be justified by other services such as freight?

But the multiple-unit train handles a mass transportation which so far has no competitive challenge. The outstanding center of heavy electric suburban service is, of course, New York, where the New York Central, the New York, New Haven & Hartford, the Long Island Railroad, the Pennsylvania and the Lackawanna deliver some 200,000 passengers a day into the metropolis by multiple-unit trains. The subways, no less multiple-unit railroads even though not part of the big standard railroad systems, handle nearly six million passengers daily in multiple-unit equipment.

Around Philadelphia the Pennsylvania, the Seashore Lines, and the Reading do a big multiple-unit suburban service and some Pennsylvania multiple-unit trains operate through between Philadelphia and New York. Chicago has talked railroad electrification for decades, but the only steam-railroad electrified service there is on the Illinois Central. The IC suburban service has been operated on an unusually aggressive policy, including both low fares and all-day-long 10-minute headway as talking points. Also running into Chicago are three ex-interurban lines which have really graduated into the heavy multiple-unit suburban classification: the South Shore Line, the North Shore Line, and the Chicago, Aurora & Elgin. In spite of the aggressive suburban policy of a number of steam railroads into Chicago, notably the Chicago & North Western, the Burlington, and the Rock Island, it is very likely that the four electrified services handle a majority of all suburban passengers entering Chicago.

San Francisco and Los Angeles are other

Courtesy IC.

Illinois Central.

In Chicago the Illinois Central runs as many as 70 electric trains an hour into and out of its suburban terminal at Randolph Street. Part of the right of way has six electric tracks for suburban trains and four steam tracks for through trains.

active centers of multiple-unit suburban operation. The Bay Bridge between San Francisco and Oakland was built with an extra deck for trucks and electric railroad trains, and while two of the lines which originally used the bridge, the Sacramento Northern and the Interurban Electric, have since ceased operation, most of the suburban business of these two railroads has been taken over by the still-operating Key Route, which fans out into practically all parts of the San Francisco East-bay region. Around Los Angeles, the Pacific Electric blankets the countryside. [For complete write-up of Pacific Electric see June 1942 TRAINS]. Montreal has heavy multiple-unit electric service on Canadian National suburban lines.

Rapid-transit lines depend on the multiple-unit electric car for their very being. The New York subways, mentioned before, operate 10-car trains on both the Interborough and Independent Divisions, and eight-car trains on the B-M-T Division. It is not generally appreciated that a modern four-track subway operated with 10-car trains on close headway has the same passenger-carrying capacity as all the private

Courtesy South Shore Line.

automobiles that could theoretically be driven on a street more than a mile wide! Many a city could, like New York, save money by building subways even at the expense of a general tax subsidy, because the subways would appreciably lessen surface congestion and the need for street widening. Of course, a prerequisite to this is sufficient traffic to really use the tremendous capacity of the multiple-unit trains, and service convenient enough and attractive enough so that people will use it.

The Chicago Rapid Transit (elevated) has solved the convenience angle by a transfer system between the elevated and surface car and bus routes, so that the rapid-transit service is, in effect, spread over a much wider area. The loop tracks, over which all Chicago el trains circle the downtown area, are known as the hottest in the world, and during rush hours there is an el train moving into or out of the double-track loop (both tracks used in same direction, counterclockwise) every 15 seconds. The Lake-Wells intersection is the world's busiest railroad crossing. Longest trains run are eight cars, and of these at least four are motor cars.

Philadelphia and Boston are other cities well provided with intracity heavy electric railroads, and in both cases elevateds and subways are used in combination. The Camden Bridge trains in Philadelphia are made up of relatively new and light rolling stock.

There are many smaller suburban railroads scattered across the country and operating on the same principle. Relatively few are the heavy suburban electrifications which have been abandoned, and most of these few are obviously planned unwisely and located in a territory which could not hope to permanently support an intensive service. There was, for instance, the electrification of the Erie Railroad from Rochester south through Avon to Mount Morris, which was taken out only within the last decade, and there was the electrification by a separate operating corporation of the West Shore railroad tracks between Syracuse and Utica. The lengthy electrified suburban lines of the Southern Pacific around Portland, Ore., went out

South Shore Line and Pacific Electric.

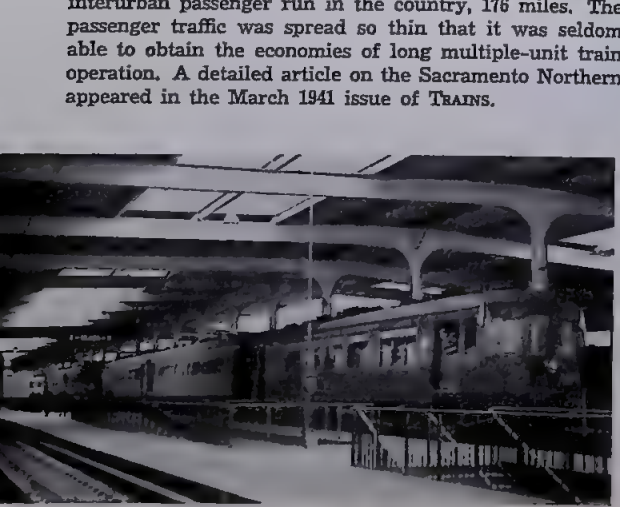
On the opposite page an eight-car South Shore Line limited sings along toward South Bend, Ind., paralleling traffic on the usually crowded Dunes Highway. The South Shore is in every way a heavy-duty railroad, completely rebuilt by the late Samuel Insull from a nearly defunct interurban line. It enters Chicago over the Illinois Central tracks, and like the IC uses power at 1500 volts D. C. The Pacific Electric now limits trains to five cars, but it used to operate six-car *Catalina Specials* (below) to Wilmington.

F. J. Peterson, 1748 S. New Hampshire, Los Angeles, Cali

Pacific Electric.

On the West Coast.

The *Calship Special*, a Pacific Electric train for shipyard workers in the Los Angeles area, is made up of cars from the now-abandoned Interurban Electric, an SP subsidiary which formerly served much of the Oakland-Alameda-Berkeley area across the bay from San Francisco. On the opposite page are some of these same cars in their original locale only two years ago. A more unified service is now provided in the Eastbay area by the Interurban Electric's former competitor, the Key Route, using some IE trackage but none of the heavy, 72-foot 10½-inch cars. The Sacramento Northern, now freight only, also used to run into the San Francisco Bridge Terminal (below), now used only by Key Route. The Sacramento Northern, however, was not a suburban railroad, but a long-distance interurban line with the longest interurban passenger run in the country, 176 miles. The passenger traffic was spread so thin that it was seldom able to obtain the economies of long multiple-unit train operation. A detailed article on the Sacramento Northern appeared in the March 1941 issue of TRAINS.



Fred Fellow Jr., 1282 Carlotta Ave., Berkeley, Calif.

years ago simply because there wasn't enough business for a heavy suburban-type railroad.

Probably the only narrow-gauge suburban electric line was in Boston, the three-foot-gauge Boston, Revere Beach & Lynn. This was originally a steam suburban line operating 13.2 miles from East Boston to Lynn and Winthrop. It was electrified in 1928, and motor equipment was installed on 60 existing open-platform coaches. The road hauled some 35,000 passengers a day, but the electrification did not stop a downward trend of revenue and the narrow-gauge electric was abandoned in 1940.

Theoretically, with multiple-unit cars, a train can be of any length, for as long as each car has its own motor, plenty of power is available. Practically, many things interfere—things such as the voltage necessary to carry the electrical control impulses through a long train, the power available on the trolley wire or third rail, and braking difficulties. Nevertheless, wherever electric-railroad men gather, a mention of the longest possible length of multiple-unit train is sure to start a good discussion.

George Krambles, of the engineering department of the Chicago Rapid Transit, says that for long trains it is important that the mechanical design of the cars be suited for the shocks and surges imposed by starts, stops, curves, changes in grade, and track irregularities. He adds that unpleasant and sometimes alarming jerks and pauses are frequently introduced by slack action caused when an air-brake system satisfactory on short trains becomes sluggish and operates without synchronization on long trains. Instead of uniform application and release of the brakes on all cars, these functions sometimes take place at random as the individual brake triple valves come into play. A sudden release of the brakes after they have been applied has been known to result in continued application at the rear end of the train followed by partial release at the front, and this action can be so severe as to pull a train in two.

The longest multiple-unit trains in regular service are the 16-car trains used on the New York Central out of New York City to accommodate regular commutation travel. On this line all cars are power units—69-foot 3-inch coaches with two seats on one side of the aisle and three seats on the other. The 1108-foot-long 16-car train can really carry a crowd, up to about 1600 people! The South Shore Line out of Chicago ran a 15-car train for the use of a

Jim Morley.

Pullman-Standard Car Manufacturing Company picnic on July 20, 1940. This was made up of eight motor and seven trailer cars and carried 923 persons. In handling this train it was necessary to accelerate and brake much more slowly than normal in order to avoid overload to the power supply and damage to the equipment, but on favorable stretches speeds up to 60 miles per hour were obtained. An interesting sidelight on this trip was that at the Michigan City end of the run the special was taken in charge by a Michigan Central Railroad 0-6-0 steam switch engine which hauled the complete multiple-unit train over the sidings to the picnic grounds. The normal South Shore train is 10 cars maximum, and trains of this size are operated frequently. Generally, three motor cars are used to every trailer. On a typical recent Sunday, eight 10-car trains operated into and out of Chicago.

The length of station platforms governs the number of cars in a multiple-unit train more often than the mechanical and electrical characteristics of the cars themselves. For instance, the longest trains regularly operated by both the North Shore Line and the Chicago, Aurora & Elgin are of eight cars, and even these require double station stops at some of the stations of the Chicago Elevated, over which they leave the city. The Illinois Central suburban service out of Chicago is likewise limited to eight cars because of the station platforms. These Illinois Central trains are made up of two-car units consisting of one car and one trailer semi-permanently coupled, and hence there are always an even number of cars.

On other lines the length of multiple-unit trains is limited by a definite company policy, probably determined by operating experience in the past. The Pacific Electric limits its trains to a maximum of five cars although until two years ago six-car trains were run to the Catalina Terminal at Wilmington. The Milwaukee Electric Lines, a suburban remnant of a once-extensive interurban system, limits trains to three cars. The New Haven out of New York operates 14-car trains on many occasions, but this is the limit of length because of the D. C. power used between Woodlawn station and Grand Central Terminal. The New Haven's own tracks beyond Woodlawn use 11,000 volts A. C. On the New Haven a maximum of two trailers is used with each motor car. The Pennsylvania Railroad operates multiple-unit trains of up to 14 cars. When two, three or four cars are used, they are all motor cars. In five-, six- and seven-car trains there may be one trailer; in eight- and nine-car trains, two trailers; in 11-, 12- and 13-car trains, three trailers; while 14-car trains have four trailers. The Reading Railroad out of Philadelphia customarily runs four-car trains but frequently uses six cars in

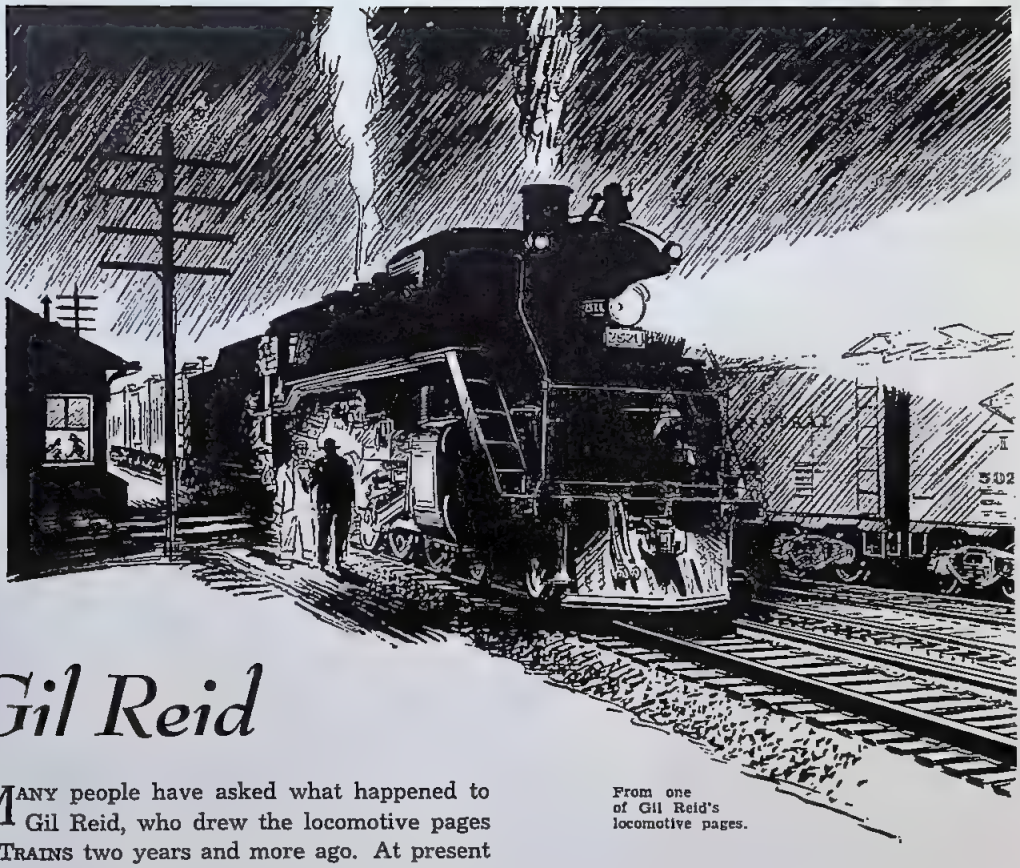
a train. The Lackawanna operates a 12-car train daily except Sunday between Morristown, N. J., and Hoboken.

But still no one has deliberately put endless multiple-unit cars together to see how many will operate simultaneously in a train. The result might be interesting, but from a practical standpoint it wouldn't mean much. The suburban electric railroads would go right on hauling their millions of passengers in the train lengths they find best suited to their individual conditions. Frank J. Sprague certainly did start something.

Short and long trains.

Longest multiple-unit trains of which we can find record are the 16-car suburbans regularly run by the New York Central. A 12-car NYC electric is shown at bottom of page, running along the Harlem River. At the other end of the scale are the single cars run by many an interurban line. The largest interurban system in the country, Illinois Terminal Railroad [September 1941 TRAINS], although a Class 1 railroad in its own right, covers most of its passenger schedules with single cars. Some IT trains are regularly scheduled with two cars, a coach and parlor-diner-observation, and during rush periods cars are added to make trains like the four-car *Illmo Limited* (completely air-conditioned) shown at top in Morton, near Peoria, Ill. Second from top is a Lackawanna multiple-unit train, and below it is a Pennsylvania Railroad suburban train on the main line west of Philadelphia.

Photos, top to bottom: Paul Stringham, Rock Island News Stand, Peoria, Ill.; William B. Berry Jr., DL&W RR., Hoboken, N. J.; Pennsylvania Railroad; New York Central.



From one of Gil Reid's locomotive pages.

Gil Reid

MANY people have asked what happened to Gil Reid, who drew the locomotive pages in TRAINS two years and more ago. At present he is with the U. S. Army as Lt. Gil Reid of the Corps of Engineers, stationed somewhere in Africa. He entered the service on November 19, 1941, and finding that army life took up too much time to allow for outside interests, was forced to abandon his monthly locomotive personality page. He was commissioned at Fort Belvoir, Va., and four months later left for overseas duty. He married Ann Marshall before going abroad.

Gil hails originally from St. Louis, and received his art training at the Chicago Academy of Fine Arts, which has turned out several notable cartoonists. He can't trace back to the time when he became interested in trains, but if usually reliable sources are true, it happened when he was first given a small wooden train for a present. Since then, anything remotely connected with trains hits a tender spot with him.

Perhaps his greatest ambition (except getting this war won) is to own a real life-size railroad consisting of an engine and tender, several freight cars and a caboose. He doesn't want more than 20 miles of track, and insists that he is going to run it all by himself. At present this ambition comes strictly under the heading of "future business."

While in Africa, he hopes to see and make drawings of foreign railroads which may become the basis of many fine articles in the future. He is a person whose interest in railroads and railroading is sincere, and his knowledge is accurate. He takes the subject very seriously, and spent some time working in a roundhouse so that his knowledge of engines would be firsthand and not based upon other sources. When he draws an engine or prepares an engine page for TRAINS, he spends a great deal of time in research work on that particular type of engine. He stresses detail, and with the benefit of a sound working knowledge turns out not only fine drawings, but accurate drawings as well.

The watercolor on the next two pages is not strictly representative of any particular scene. The engine is a typical Pacific, the setting a typical small-town water stop. The feeling and the expression are Gil Reid.

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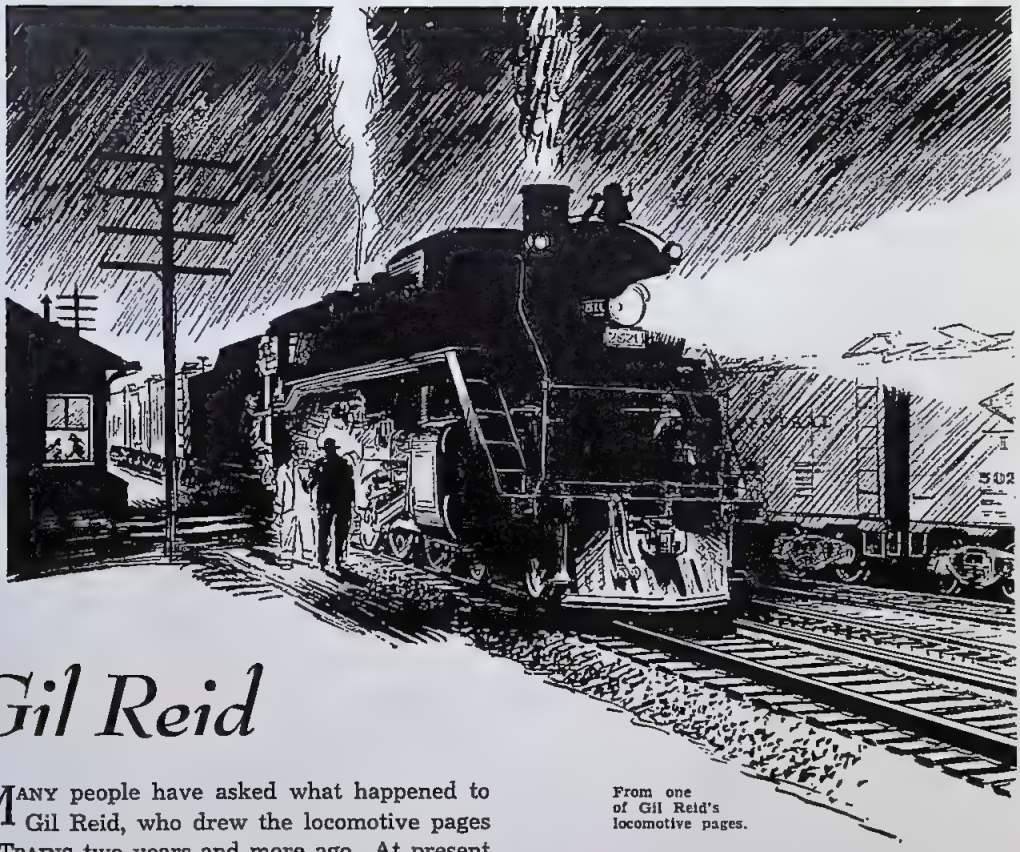

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Noonday Water Stop

GIL REID

Richmond, Fredericksburg & Potomac 2-8-4

Built 1943 by Lima.

Specifications:

Cylinders, diameter and stroke	25" x 34"
Tractive force	64,100 lbs.
Drivers, diameter	69"
Weight on drivers	270,900 lbs.
Weight in working order	433,200 lbs.
Boiler pressure	245 lbs.
Tender capacity	Water, 22,000 gals.; coal, 25 tons
Grate area	90.3 sq. ft.
Total area of heating surfaces	4772 sq. ft.

Outstanding Berkshire-type locomotives.

Road	Number of engines	Builder
Boston & Albany	55	Lima
Illinois Central	51	Lima
Missouri Pacific	25	Lima
Missouri Pacific (IGN)	5	Alco
Pere Marquette	15	Lima
Boston & Maine	25	Lima
Toronto, Hamilton & Buffalo	2	Montreal
Norfolk Southern	5	Baldwin
Wheeling & Lake Erie	22	Alco
Erie	25	Alco
"	35	Baldwin
"	45	Lima
Nickel Plate	15	Alco
Detroit, Toledo & Ironton	8	Lima
Chicago & North Western	12	Alco

TEN new Berkshire-type Lima-built locomotives were placed in service on the Richmond, Fredericksburg & Potomac recently. These augment the 18 modern 4-8-4 locomotives of the General (freight) and Governor (passenger) classes already in use on the Capital Cities Route.

The Berkshire type of locomotive was originally developed by the Lima Locomotive Works in 1924 and with the 2-10-4 type formed a line of Super-Power locomotives which were aggressively pushed. Both these types differed from previous freight locomotives not only in engineering details but in having four-wheel trailing trucks supporting increased firebox capacity. The original 2-8-4 experimental engine was tried out by the Boston & Albany and the Illinois Central. Both roads purchased more and the IC bought the original sample. The B&A dubbed the type Berkshire because it was so successful in service over the Berkshire Hills.

Most locomotives of this type were built in the first few years after its introduction. The 4-8-4 type has since been more popular for new power, but the Berkshire is one of the more modern types of wheel arrangement which is sure to receive consideration when a new design is being engineered. It is largely the total weight and its distribution which determine the final choice of wheel arrangement, although the four-wheel leading truck is more inherently suited for high-speed service.

C. L. Tilbury, 1120 W. 19th Ave., Spokane, Wash. Courtesy Northern Pacific.

New Northern Pacific 4-8-4

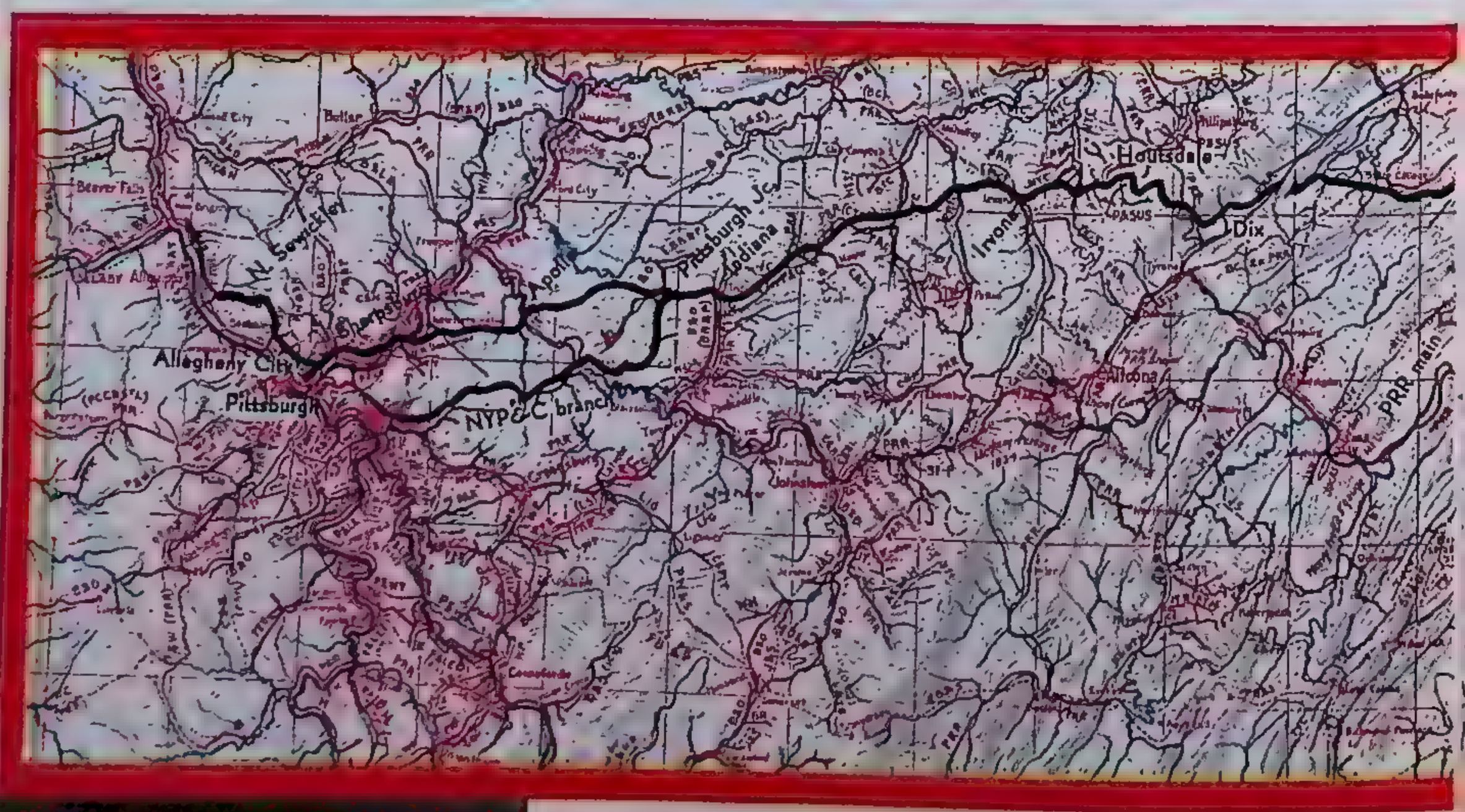
The 4-8-4 type of locomotive, now so popular, has no generally accepted name, but the nearest to acceptance is "Northern type," because the Northern Pacific was among the first roads to use this wheel arrangement. The eight new Class A-4's built for Northern Pacific recently by Baldwin are numbered 2670 to 2677. Running between St. Paul, Minn., and Livingston, Mont., 1008 miles, they handle train operation continuously for 24 hours 35 minutes westbound, and 23 hours 10 minutes eastbound.

Specifications:

Tractive force	69,800 lbs.
Drivers, diameter	77"
Weight on drivers	294,000 lbs.
Weight in working order	945,800 lbs.
Boiler pressure	260 lbs.
Tender capacity	Water, 25,000 gals.; coal, 27 tons

BLUEPRINT RAILROAD

Most of the railroads which network Pennsylvania follow the natural routes, river valleys running between the mountain ridges. But the New York, Pittsburgh & Chicago proposed to ignore the natural watercourses almost entirely and to boldly cross the ridges, regardless of original construction expense, along the shortest east and west line. The map shows clearly how the proposed railroad (black line) would have compared with existing roads (red lines).



World's most modern railroad, projected across Pennsylvania in the '20's, was never built.

By William Moedinger Jr.

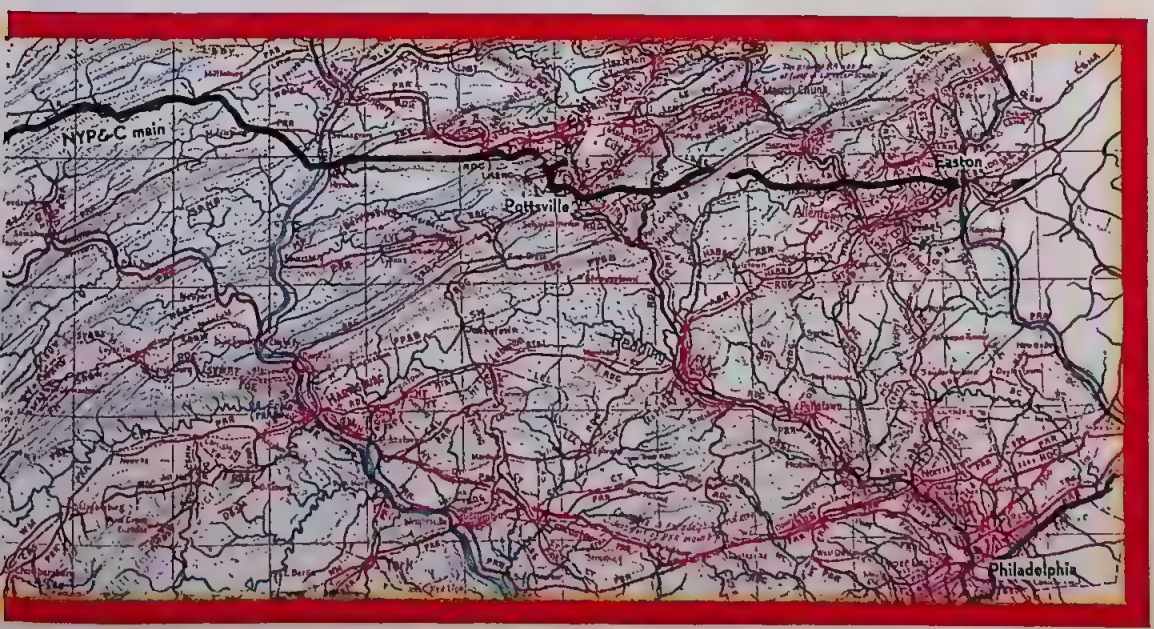
WAS Leonor F. Loree right? The Interstate Commerce Commission didn't think so, for in 1926 it refused him authority to build the New York, Pittsburgh & Chicago, a railroad which would have hurdled the mountains of Pennsylvania with the almost negligible ruling grade of 0.3 per cent against eastbound traffic and 0.4 per cent westbound.

One of the most colorful and dynamic railroad genii of his generation, Mr. Loree came up in the railroad ranks from civil engineer. He was a firm believer in the doctrine of increased productivity, one of the "lower-grades, bigger-motive-power" railroaders who have brought the average cost of railroad freight transportation down from seven cents a ton-mile, through four and three cents, to the present level of less than a cent a ton-mile.

While general manager of the Pennsylvania System at the age of 38, Leonor Loree no doubt had a good taste of the problems of crossing the Alleghenies. But it wasn't until 30 years later that he was to upset the equanimity of the trunk-line managements by proposing the super-railroad across the Keystone State. The project was hailed in the press, in financial circles, and by authorities on railroad construction as the world's most modern railroad.

Why, then, wasn't it built? To begin with, it violated an old established theory of railroad location. It did not run through sources of on-line traffic. It proposed to exist by one means alone, by carrying through freight across Pennsylvania more efficiently than it had ever been carried before, on a route which would shorten the New York-Pittsburgh distance by nearly 80 miles. Loree, in his engineer's vision of the future, saw this as ample justification for spending 260 million dollars in new capital.

But to the I. C. C. the only reason for such a line was full economic return in the present or the immediate future. And the I. C. C. foresaw that the spending of 260 million dollars to build a new line better than any existing routes would force the trunk lines in turn to improve their railroads or lose the through traffic which they had built up. And the I. C. C. didn't think the operating savings of Loree's super-railroad worth the huge capital investments which would result not only on the New York, Pittsburgh & Chicago, but on the Pennsylvania, the Baltimore & Ohio, and all the other trunk lines



Linn H. Westcott. Base copyright 1942 Kalmbach Publishing Co.

New York-Chicago mileages.

The New York, Pittsburgh & Chicago would have shortened the New York-Chicago rail distance to 830 miles, which compares with these present standard routes:

Pennsylvania Railroad, 908 miles.
Lackawanna-Nickel Plate, 920 miles.
New York Central, 960 miles.
Baltimore & Ohio, 976 miles (freight line).
Lehigh Valley-Grand Trunk, 984 miles.
Erie, 999 miles.

A route of 895 miles exists, but it is a "rail-fans' delight" combination of trackage, using B&O from Chicago to DuBois, NYC to Newberry Junction, and Reading and CNJ to New York. This is by no means a recognized route, but there is an established route via NYC from Chicago to Newberry Junction (near Williamsport, Pa.) and then Reading and CNJ to New York. This is 25 miles shorter than the NYC main line, but distance is not the main consideration. The main line is superior in every way: speed, facilities, grades.

which would be forced to compete with its operating economies.

So the application was denied and the world's "most modern railroad" was lost to posterity. Or will it some day be built when a growing country needs greater railroad capacity across Pennsylvania? The Commission did not make its decision an irrevocable ultimatum, but left the way open for reapplication, especially should the low-grade line be proposed in such a way that existing trunk lines would have an interest in it as a means of improving their own service and adding to their capacity. To date, no such proposal has been made, although each of the trunk lines no doubt recognizes the desirability of such a line and has its own private plans for the future. Meanwhile the New York, Pittsburgh & Chicago lives only in carefully filed rolls of blueprints.

The railroad name is a misnomer, strictly speaking, for it was never intended that Chicago should see its tracks. Even New York was only a proposed extension. The application and the detailed surveys and plans were for a 283-mile double-track railroad running in almost a direct line from Easton on the Delaware River to Allegheny City, across the Allegheny River from downtown Pittsburgh. Three branches were to provide connections with North Sewickley, some 30 miles down the Ohio River from Pittsburgh, with downtown Pittsburgh itself, and with the rich anthracite region in the eastern part of the state.

Basically the railroad was to be a bridge, a highly efficient bridge, between the railroads west of Pittsburgh and those east of Easton. The connections weren't definitely arranged, for such things can seldom be negotiated on a when, as and if basis, but at Easton they might have been either the Lehigh Valley or the Central of New Jersey. However, the new route would short-haul both of these railroads by taking over traffic which they might otherwise carry much farther west on their own rails, and so they were none too friendly. And at Pittsburgh the connections might have been B&O or Pennsylvania, both of whom were obviously among the principal objectors to the scheme.

The whole thing was only a part of Leonor Loree's plan for a fifth Eastern trunk line. Loree was president of the Delaware & Hudson, and around this road he would have created a system to figure in the consolidation plans which were so prevalent in the 1920's. With the new cross-Pennsylvania trunk line, the Lehigh Valley, the Wabash, the Wheeling & Lake Erie, and the Buffalo, Rochester & Pittsburgh (now B&O), Loree would have had a system to conjure with, and the New York, Pittsburgh & Chicago would have obtained friendly traffic connections at both ends.

But the proposition wasn't really Loree's. It was a project started in the early years of the century by Loree's great and good friend, Edward Henry Harriman, and Loree in working out the details and presenting the case to the I. C. C. was acting for the Harriman Estate.

Like every great railroad, built or proposed, the NYP&C route originated in the brain of one man, and that man was Joseph Ramsey, onetime president of the Wabash and the Wheeling & Lake Erie. Ramsey was convinced that the Pennsylvania Railroad had monopolized the lucrative Pennsylvania region long enough and that there was rich booty awaiting any railroad that would dare to invade the sanctum. He discovered others not only sympathetic to this idea, but, in their own words, "ready to back it up financially." On the strength of this encouragement he bought up, around the turn of the century, the franchises of every unbuilt railroad which could possibly be used as a segment of his proposed cross-Pennsylvania line. Then, in 1903, after consolidating these individual charters, the final route was determined by

William Moedinger Jr., 23 E. Vine St., Lancaster, Pa.

Tyrone-Loch Haven Branch.

In its trans-Pennsylvania thrust, the NYP&C would have crossed every one of the mountain ranges which comprise the Appalachian barrier running northeast-southwest through the Keystone State. In most of the valleys between these ranges are railroads, some of them weed-grown branches, others highly important secondary main lines. At Dix Station in the Bald Eagle Valley, seven miles northeast of Tyrone, the "world's most modern railroad" would have crossed the Pennsylvania's Tyrone-Loch Haven Branch, more familiarly known as the Bald Eagle Valley Branch. The photo shows a Tyrone-bound freight approaching Dix Station—a humble, concrete telephone shanty behind the photographer.

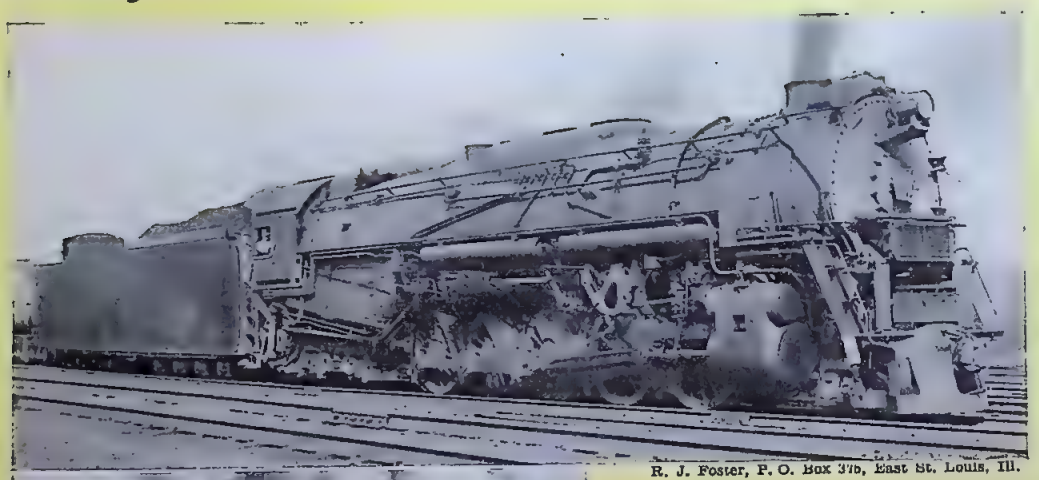
a corps of surveyors, and Ramsey was all ready to go ahead—until he looked around for all that promised financial backing.

For a while it looked very much as though he had been left holding the bag. But there was another man who had been quietly appraising the Pennsylvania field, this time a man who could furnish most of the financial backing himself. The man was E. H. Harriman. Convinced that here was a golden investment opportunity, Harriman, in 1908, paid Ramsey $290,000 for all franchise rights to the railroad. Shortly thereafter, however, Harriman died, and these rights became a part of the Harriman Estate. Temporarily obscured by the complications and legalities of the estate, the railroad plan seemed entirely forgotten. In 1919, out of a clear sky, the charter was renewed; and the E. H. Harriman Estate turned its attention to the trans-Pennsylvania project.

During the ensuing five years intensive surveys and studies were made of the route. The original idea of just another railroad evolved into plans for a super-railroad. In January, 1925, under the direction of Loree, who had been chosen to represent the estate, the New York, Pittsburgh & Chicago Railroad was incorporated as the successor to four other companies bearing similar or identical names. Five months later Loree presented the plan, with all of the features which earned it the title of "the world's most modern railroad," to the Interstate Commerce Commission.

On behalf of the Harriman Estate, Loree made a stirring plea. Statistically, he proved that, on

Pennsylvania's New 2-10-4 Locomotives



R. J. Foster, P. O. Box 376, East St. Louis, Ill.

A new standard type of locomotive on the Pennsylvania Railroad is indeed an Event, for the Pennsy has standardized its power to a high degree. After a type of locomotive is once engineered on the Pennsylvania it is a design which can be used for years, as the K-4 Pacific, built for 14 years and still the standard steam passenger power on the system. Under pressure of war traffic a new design has appeared in quantities more than experimental. It is the J-1 Texas type, of which several dozen are now pulling freight on the line through Indianapolis to St. Louis.

the basis of tonnage increases for the preceding two or three decades, the existing mainline routes would be unable to handle the traffic within 20 or 30 years. The Commission, however, pointed out that Loree's future traffic prophecies were purely theoretical; and until this additional traffic should develop the proposed railroad could exist only on tonnage then moving over the rails of competing lines, which included not only the Pennsylvania, its chief competitor, but the New York Central, the Baltimore & Ohio, the Erie, the Lackawanna, the Lehigh Valley, and numerous smaller roads participating in this through business.

As Loree had expected, all of these roads fought the proposed railroad to the utmost, but he was prepared for this. The NYP&C was prepared to spend $728,000 per mile for the main line alone. This nearly unparalleled expenditure (the Wabash Pittsburgh Terminal Railroad cost $840,000 per mile) would not only insure the new railroad of fair profits which would inevitably accrue from low operating expenditures, but its directness and ultra-modern construction would also result in savings for shippers who, at the time, were forced to use the longer and slower lines of competitors.

To these claims the Commission gave due consideration, and especially to those which Loree pointed out would benefit the shipper and the public. In the end, as we have already seen, the Commission recognized the adequacy of existing routes and facilities. The application was denied, the NYP&C blueprints were filed away, and the fifth trunk-line consolidation scheme ended up only as a profitable investment sortie for the D&H. So if we want a first-hand look at the New York, Pittsburgh & Chicago we must travel in imagination. Let us *pretend* that the learned gentlemen in Washington felt more kindly toward that application

17 years ago, and that early in 1930 construction work was finished and the dream railroad was opened with all due fanfare, including a speech by President Hoover and a golden-spike-driving by Mr. Loree, elegant in his side whiskers.

DIRECTLY below New York, Ontario & Western in the index of the *Official Guide* for June, 1943, is the New York, Pittsburgh & Chicago. The schedules are sandwiched between the Delaware & Hudson and the Lehigh Valley, and display the slogan "New York-Pittsburgh Short Line." The road isn't a new one to you. Chronic *Guide* reader that you are, you've scanned the timetables since they first appeared 13 years ago. In fact, you rode the NYP&C two or three years ago. That time you were enjoying the comforts of roomette accommodations in a through Pullman from Chicago, one of three dropped from the B&O in Pittsburgh and turned over to the Jersey Central in Easton. Because the trip was at night you remember very little about the short line except the promise to yourself at that time to some day ride it in daylight.

It's a quarter of 8 in the morning, and you're standing (still in fantasy) in front of the New York, Pittsburgh & Chicago's ticket window in Easton, Pa., bent on fulfilling that promise. In response to your request for a ticket to Pittsburgh the agent apologetically informs you there isn't a train until early evening, not unless——. Yes, you're going to ride the six-hour-plus local leaving at 8 o'clock, the only passenger train affording a daylight ride over the entire 280-odd miles to Pittsburgh. Passenger business with this railroad, you've long since learned, is merely a sideline. The only other westbound passenger trains are made up of through coaches and Pullmans to Pittsburgh, Cincinnati, St. Louis, and Chicago, and, in order to coincide with the habits of this type of patronage, operate substantially or entirely at night over the tracks of the NYP&C.

Your train, the *Pittsburgh Day Express*, leaves right on the advertised; but it isn't until it reaches the outskirts of Easton that you catch the first glimpse of the real railroad. Here, coming in from the left, from the direction of the Jersey Central and Lehigh Valley main lines, is a sprawling interchange yard. Just ahead its maze of tracks funnels into four bright ribbons of 130-pound steel. Here is Milepost 0, the beginning of a main line that is the envy of every railroad executive in the world. A brief stop before entering the main line, while your conductor gets his orders, enables you to observe and appraise the tremendous volume of the road's freight business. But there's a long freight drag pulling out of the yards right ahead of your passenger train. You'll never arrive in Pittsburgh at 2:20 with that ahead of you. The caboose hasn't even cleared the yards yet!

Here comes the conductor with his orders, and you're willing to bet he's plenty sore. Even if this is essentially a local, with almost a score of regular stops, the timetable calls for an average over-all speed of within a fraction of 45 miles per hour. You're still waiting for the freight to clear the block ahead when the conductor comes through, ticket punch in hand. While with all of the other passengers, who apparently are regular riders, he exchanges some bit of local gossip, to you, a total stranger, it's a hearty "Good morning" and "All the way to Pittsburgh? It'll be more comfortable on the other side where it's shady." Momentarily stunned by the utter complacency and jovialness of a conductor who is forced to play second fiddle to a lowly freight drag, you automatically move to the shady side as No. 1 eases on to the main line.

You soon learn that letting a freight run first is just one of many unorthodox practices which are standard procedure on "the world's most modern railroad." But you're interested in the 250-odd miles of super-railroad that lie ahead, between Milepost 0 and Pittsburgh Junction, where No. 1 will leave the main line to go directly into the heart of the Steel City. Though not without curves, the first 55 miles, to Pottsville, follow a route that is almost crow-flight straight, through prosperous farming country interposed with industries which flourish upon wealth hidden below the rich loam. East of

Next month:

A well executed satire on railroads and railroad fans by that famous playwright, economist, and historian, Count Kolya Shottski.

"The Old North Western," a collection of stories about train operation on the C&NW back in the 1850's and '60's, illustrated with some old photographs which are collectors' gems.

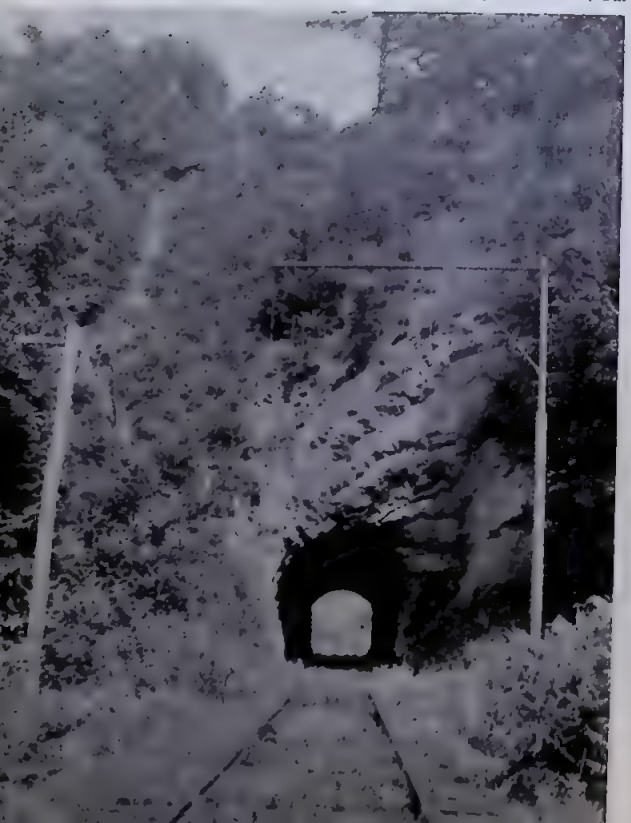
More builders' photos and specifications of new locomotives.

William Moedinger Jr.

Pennsy's Lewisburg Branch.

For most of its projected route the NYP&C crosses existing lines. One exception is in the Poe Valley, where for miles the surveyed route runs alongside the Pennsy's Lewisburg Branch (photos).

S. H. Fredericks Jr., 55 W. Main St., Lock Haven, Pa.



the Lehigh River are great slate and cement plants, the latter's storage silos resembling huge grain elevators in the distance. Beyond the Lehigh River bridge more farms dot the countryside, interrupted only by a long tunnel through Blue Mountain, but, nearing Pottsville, the farms give way to intensive mining operations in man's quest for heat-producing anthracite.

A four- or five-mile northwesterly detour at maximum grade is the answer construction engineers gave to the nasty topographical situation just west of Pottsville. This forced deviation has nevertheless proved advantageous to the railroad, bringing it closer to the heart of the anthracite region. Along here the stubby St. Clair Branch leaves the main line. You pass through another long tunnel, coming out near Gordon, also on the Reading's Philadelphia-Williamsport line. Here the main line turns westward again, following between two long ridges in the Mahoney Creek Valley for an easy drop to the Susquehanna River.

After crossing the Susquehanna over a high-level steel trestle two miles north of Herndon, the *Pittsburgh Day Express* strikes northward again, first along Middle Creek, then through a couple of miles of heavy earthwork, and finally to Penns Creek and Poe Valley. For more than

20 miles this rurally beautiful lap of land is shared with the Pennsy's Lewisburg-Bellefonte Branch.

It seems almost unbelievable that this sheltered valley, virtually surrounded by green-clad mountains, is little more than an hour from the industrial hubbub which characterizes the railroad's eastern terminus. Just beyond Rising Springs you leave this enchanting valley and continue southwestward, just missing State College and the Bellefonte Central.

The mountains you watched back a piece are all about you now; and the rhythmical staccato, which floats through the open windows, is evidence enough that something is being done about them. Another tunnel, and you're dropping down into the broad Bald Eagle Valley. At Dix Station you cross over the Pennsy's Bald Eagle Valley Branch, from Tyrone to Loch Haven, and it is here that the train begins the fourth and last of its mountain crossings.

If you think you've already seen some spectacular railroad construction, keep your eyes on the next 30 or 40 miles. The mountains thus far have, more or less, arranged themselves in rows, and it has been just a matter of hurdling from one valley to the next. Up here in the soft-coal country, Pennsylvania's hinterland, the mountains rear up everywhere. From Houtzdale the general course of the NYP&C is straight southwest to Pittsburgh. Actually, of course, it does quite a bit of maneuvering in an effort to compromise with Mother Nature in the ensuing 45 miles to Indiana. There are a few short tunnels and two viaducts reminiscent of the Erie or Lehigh Valley. And if you've wondered about all of those stray single-track railroads, just ask the conductor. He'll tell you they're responsible for many a long Pennsy or NYC coal train.

"Get a lot of coal out of these hills ourselves," the conductor volunteers. And pointing to some hills to the south, "Over there's a little pike, Cambria & Indiana they call it, that owns so many coal cars that it wouldn't know what to do with them, if they all returned empty at one time. The road's only 37 miles long to begin with; and, if they strung all of their hoppers into one train, they'd only have 13 miles of track left on which to run the train.

"You might as well get out and stretch a bit. State Teachers' College is in Indiana, and we've always got a lot of mail for this place," suggests the conductor. According to the station clock you've made up every minute of lost time. Not bad with a freight train dead ahead of you!

A service application by the engineer four miles west of Indiana can mean but one thing: Pittsburgh Junction. You glide over a high-speed switch and gradually the high rails of the main line seem to rise outside the left windows as the train prepares to duck beneath them at this "flying junction." The muffled sound of heavy trucks on light rail officially announces that you're on the last lap of your trip, the Pittsburgh Branch. With the observation that from here on railroading is just like that on any other road, you're suddenly aware that you still have the sandwiches you purchased in Easton this morning. The ride was so absorbing that you forgot all about getting hungry.

But the appeasement of a well ripened appetite provides the opportunity for some real, concentrated reflection on this superb piece of railroad—250 miles, through the most rugged country east of the Rockies, every mile of it on curves and grades of which the average Midwestern road, streaking across the Great Plains, might well be proud.

"Well, what d'ya think of our pike?" inquires the conductor, as he settles himself comfortably across the aisle. And here's your cue to ask all of the questions those 250 miles have provoked. He tackles the one about grade percentages. "I believe our steepest grade is westbound, about twen——. Wait a minute! I've got a little booklet in my kit here that'll answer most of your questions. Traffic department gives 'em out to prospective shippers." He thumbs through its 16 pages seeking the information. "Can't seem to fin——. Yep, here it is, inside

We cannot furnish pictures.

Sorry, but TRAINS is not in the engine-picture business and therefore cannot furnish prints to those who request them. All our prints are needed for our files. In many cases prints can be obtained by writing to the individual whose name appears beneath the magazine reproduction; it is for this reason that the address is often included in the credit line.

the back cover: 'Comparative Facts and Figures About the World's Most Modern Railroad'."

By way of explanation, a short footnote says that the figures present a comparison between the NYP&C main line and the next shortest trans-Pennsylvania route, referring, of course, to the Pennsy's Philadelphia-Pittsburgh line. Succinctly informative tables reveal that the steepest grade on the NYP&C's main line, including the 30 miles west of Pittsburgh Junction, over which there is no passenger service, does not exceed 21 feet to the mile, or 0.4 per cent, westbound, and 16 feet to the mile, or 0.3 per cent, eastbound. Comparing these figures with those under "the next shortest route," you find the latter's steepest westbound grade is 92 feet to the mile, or nearly 1.7 per cent. Opposite "curves" in the NYP&C column, four degrees is the sharpest curve, while "the next shortest route" is seriously handicapped with a nine-degree curve. A keen memory enables you to identify "the next shortest route" figures as those set forth by TRAINS many months ago in connection with an article on the Pennsy's famous Horseshoe Curve.

The sudden blast of two longs, a short, and another long startles you into the realization of another pertinent fact about this unusual railroad: You haven't heard that familiar sound since you got off the Jersey Central in Easton, for the simple reason that there isn't one grade crossing along the entire 283-mile main line. Every artery of vehicular traffic, from the concrete speedway of Federal Highway 322 to the muddy wagon track leading into Farmer Jones' barnyard, is separated from the NYP&C right of way by either an underpass or an overhead bridge. Even grade crossings with other railroads are absent.

But you have another question, one that's plagued you all day, one you know the book won't answer. An understanding smile, even before you've finished, indicates the conductor has been asked before about dispatching freights ahead of passenger trains. "Average running time for freights on our road," explains the conductor, "is 5 hours 40 minutes, from terminal to terminal, or a flat 50-mile-an-hour average. If we had pulled out ahead of that freight at Easton, we'd only have had to take the next siding for him to pass us. As it was, neither of us lost any more time, and it saved us an extra switching movement.

"You see, this road's concerned primarily with through business. In fact, the train you're riding on and its eastbound twin are the dispatcher's only problem-children—the only passenger trains making stops between terminals. We like to call our pike a one-speed railroad. Actually, of course, it isn't just that; but it's the nearest approach to one this world's ever seen. The mile-per-hour average of all classes of trains—local passenger, freight, and through passenger—doesn't vary to the extent that it does on other roads. With our easy curves and grades and no highway crossings to bother with, it's easy for the dispatcher to predict just where any particular train should be at any given time and to know almost to the minute when that train will pull into the yards at the end of the run."

And so, convinced that the New York, Pittsburgh & Chicago is truly a unique railroad, you take leave of it in downtown Pittsburgh, end of track and of an imaginary ride on a railroad which exists on paper only.

YES, the New York, Pittsburgh & Chicago would indeed be a unique railroad, had it been built..But it would have encountered many a problem, problems which the I. C. C. perhaps foresaw with more accuracy than did Leonor F. Loree, operating and engineering genius though he was. The best-engineered railroad does not of itself insure success. It merely insures low operating costs once traffic is secured. Of course, the NYP&C would have attracted a certain amount of traffic from competing lines by virtue of an aggressive sales department extolling the superiority of its direct main line. But in reality this would have been its sole talking-point. Except for Pittsburgh and the coal fields it tapped no sources of revenue, no large cities, no busy industrial valleys. Theoretically, the new railroad's 830-mile Chicago-to-New-York route would have given it the edge over all of the others. In reality, the time saved in miles might have been absorbed in interchange.

Nevertheless, there can be no compromise but that, mile for mile, the New York, Pittsburgh & Chicago Railroad's Easton-Allegheny City main line would have been without peer. Whether or not another attempt will ever be made to build this railroad, no one can predict. It is highly improbable that "the world's most modern railroad" will ever exist, for even in this peak year of 1943 the potential capacity of all of the other lines serving this territory is still an unknown quantity.

Six-Man Railroad

★ The Rock Port, Langdon & Northern is only 5.6 miles long and has 2 locomotives, 2 cars.

By Lloyd L. Reise.

"YES, sir," said Engineer George Dunlap from his cab in the little Standard, "50 years this pike has been operating without an accident, not even as much as a smashed finger."

Traversing the fertile Missouri River Valley lands in the northwest corner of the state of Missouri, the Rock Port, Langdon & Northern Railway extends from Rock Port, Mo., its northern terminus, 5.65 miles to connect with the Burlington's Kansas City-to-Omaha line at Langdon.

Incorporated December 2, 1889, the road was completed in July of 1890. It has been in the hands of descendants of the original builder and has operated continuously since that time. Pete Hedgpeth of Rock Port is the president and general manager and is ably assisted by his son Jimmy, secretary-treasurer, who also handles the train as brakeman-conductor. George Dunlap, the combined engineer-fireman, has been pulling the latch on this line for 28 years. C. H. Geveden is the agent at Rock Port, while functions at the Langdon end are taken care of by the "Q." These four are the entire railroad personnel except for the two and sometimes three other persons who are employed in maintenance work. It is interesting to note that the line, which is laid mostly with 52-pound rail, is in better condition than many a larger road. One trestle was recently rebuilt and there is not a single bad tie in the whole roadbed.

The little pike, the only rail connection into Rock Port, has done well despite truck competition. Rockport is the seat of Atchison County and the center of a thriving cattle feeding area. Stock pens, a bulk oil plant, and a dock for loading heavy machinery are on the principal railroad sidings in Rock Port. Many loads of feeder cattle from the southwest are hauled in here to be fattened for the markets at St. Joseph and Kansas City.

The motive power consists of No. 2, a little Baldwin tank engine built for RPL&N in 1910 and affectionately referred to by the citizenry as the "peanut roaster," and an ex-Burlington, Class A-5, Standard type, No. 440, built somewhere around 1880. It is difficult to place this engine exactly, as the engine number is probably not the original. The engines are used alternately to even up the miles operated and to cover while repairs are being made. The Rock Port engine house will accommodate both engines, and minor repairs are handled by the train crew. Heavier repairs are made by the Burlington.

George Dunlap babies his engines like the hoggers of long ago, and as a result they are as neat as a pin and in excellent shape. In the Fall

Lloyd L. Reise, 1612 High View Ave., Des Moines, Ia.

New railroad book.

THE LOUISVILLE & NASHVILLE RAILROAD, 1850-1942, by Kincaid Herr. 221 pages, 8½" x 11½", $1. *L&N Magazine*, Louisville, Ky., publisher.

FOR those who like their railroad histories neat, this book will more than satisfy. The story originated in the pages of the *L&N Magazine* and ran serially for 43 consecutive months. It is well written, complete, factual and interesting and is printed on glossy, high-grade paper and profusely illustrated with old and new photographs as well as line drawings. An insert map, 10½" x 19½", with the L&N lines and others with which it is physically and financially connected, is clear and easily read, seven colors being used to indicate the relationship existing between the L&N and the various railroads under its control or with which it has operating arrangements. A comprehensive index rounds out the book.

of 1940 the Burlington Route borrowed the venerable 440 and decked her out in gilt for a historical exhibit and tour, a significant tribute to her condition after 60 years of service. A shiny Diesel switcher, loaned to the RPL&N during the absence of the little Standard, failed to usurp her place in the hearts of the road's employees.

In addition to the two locomotives, the road also owns a flat car and one combination baggage-coach. The twice-daily train schedule is generally made with the engine and combination car alone, the flat car being used for bulky shipments that can't be handled in the baggage department. On the southbound trip the engine backs down with the coach behind it and is headed out for the northbound run without the necessity of turning at either end of the line.

Due to the short run, the road's business is of necessity mostly freight, but it has managed to just about break even for the past several years besides keeping the roadbed and equipment in the best of shape and recently completing a modernization program in the Rock Port station and general offices. This in itself is a tribute to the management and personnel of a brave little line which has managed to thrive in spite of adverse conditions.

RPL&N general offices.

At left is the combined station and general office building at Rock Port. No. 2, the "peanut roaster," was built for the railroad by Baldwin in 1910. Below, No. 440 poses with the Burlington *Zephyr* at Aurora, Ill., on the Burlington's ninetieth birthday in 1940. No. 440, once a Burlington engine, was lent to the "Q" by the RPL&N for the occasion.

Lloyd L. Reise.

Courtesy Burlington Route.

First Locomotive in Maine

The *Pioneer*, first locomotive in Maine, was built in England by Robert Stephenson and brought across the ocean in a sailing ship in 1836. It ran on the Bangor, Oldtown & Milford continuously until the abandonment of the line in 1859. The engineer of the *Pioneer* had no time to watch the track ahead. He had to keep his eyes on the machinery, and the watching was done by a lookout, on the first car of the train, who signaled the engineer by means of a bell.

From the collection of Sam E. Connor, Lewiston (Me.) *Evening Journal*.

Mr. North and Mr. West.

ONE of the most popular non-chain daytime radio programs in America is sponsored by a railroad. It is the Chicago & North Western *"400"* Hour, 55 minutes of good music interspersed with ad-lib announcements of time and railroad items of interest. Played during the breakfast hour over WMAQ, Chicago, the program helps thousands of Midwesterners get to work on time, and keeps them reminded of North Western schedules, wartime accomplishments of all railroads, and the necessity in these days of traveling only when necessary and then in the middle of the week if possible.

Until he went into the army air force recently, Norman Ross announced the hour. Now his ex-record-turner, Patsy Gallichio, has taken over. The program started in 1935 as the Illinois Central Suburban Hour and the pattern was set then, as it is now, with music ranging through anything from John Charles Thomas singing "The Open Road" to a complete symphony or concerto, with most informal commentaries by Uncle Norman. If Ross didn't like a selection, he pulled the needle off the record and said, "Let's try something else." Sometimes he read fan mail: "Please don't play any more Gilbert and Sullivan. It makes my husband splatter the shaving lather all over the bathroom." "Our dog doesn't like Sibelius so early in the morning. He gets under the bed and howls." But Uncle Norman went right ahead in his own inimitable style, and the audience grew.

The North Western took over the hour in 1937 when flood conditions forced the IC to curtail its advertising. Other sponsors have tried to secure the program since, but the North Western knows a good thing and keeps it. Ross habitually came late and nobody could do anything about it. The standby announcer kidded him about it and the listeners laid bets on whether he would be there with the waltz from "Sleeping Beauty" at 7 o'clock. Everyone had a good time, including the irregular Mr. Ross. He called his bosses "Mr. North and Mr. West" in an amiable fashion, but this the railroad executives stopped. Hundreds of letters applauded the informal character of the program, so when the management of the railroad was changed "Mr. North and Mr. West" came back, and on the farewell program when Norman left for the army he was presented with a watch engraved "From Mr. North and Mr. West."

The Man in the Tower

BY EDWARD HUNGERFORD.

A GOOD many years ago, when the Man in the Tower went to work for the Erie Railroad to start the first railroad employees' magazine in the land, he found among the properties of that ancient system a curious little railroad that wound its way out of Jersey City, up and over the hills of northern New Jersey to the Delaware Water Gap and then over the still higher Poconos to a point just outside of Wilkes-Barre, Pa. In fact, the New York, Susquehanna & Western Railroad had aspired some years before to a fairly direct entrance into Wilkes-Barre itself, by means of a long, wooden trestle and steel bridge over the Susquehanna River (thus justifying the name of the road) to a neat brick passenger station just across from the heart of Wilkes-Barre.

When the Towerman first saw that station (in 1905), it already had been abandoned and was falling into ruin. There no longer was rail connection to it. Slowly the long trestle was being abandoned. The engineers of the parent Erie were helping themselves to its fine oaken timbers whenever they had need of them. The terminal of the road (that part of it was known as the Wilkes-Barre & Eastern) was set at a rail junction called Plains, three miles east and up the hill from Wilkes-Barre. From that point a single combination train and a fairly brisk coal traffic was dispatched east each day over one of the most picturesque railroads in the East, down into Stroudsburg and to a connection with the main line of the Susquehanna, which found its way through the splendid Water Gap on the other side of the river from the much traveled main line of the Lackawanna.

CERTAIN big railroads have their Cinderellas. For years the Putnam Division has been the Cinderella of the New York Central. There are others. The Susquehanna was the Cinderella of the Erie family. And what a Cinderella!

Originally it had been planned and built south from Middletown as the New York connection of the ill-fated Oswego Midland, which ran up and over New York State to the magnificent port of Oswego on Lake Ontario—the nearest of all Great Lakes ports to the Atlantic Ocean. With its hard grades and its many curves, the Oswego Midland from the outset was a hopeless proposition. In the seventies it failed dismally. Later, a new and far better connecting link to New York Harbor was found for it from Middletown through to Cornwall and thence to Weehawken over the rails of the then-new West Shore Railroad. The road was renamed New York, Ontario & Western, and the Susquehanna link from Middletown into the Pennsylvania terminals at Jersey City was left to shift for itself. It would have had a hard time if it had not been for its commuter business in the New York suburban district and a sizable coal traffic.

A final blow to the fortunes of this railroad Cinderella came in 1931, when the great new George Washington (highway) Bridge over the Hudson from the north end of Manhattan Island to New Jersey finally was opened. The Susquehanna's commuters began leaving it in droves. They were tired of the road's dingy little steam trains, tired of the grimy terminal in Jersey City, tired of the slow ferry-crossing of the Hudson. Now they might drive their own cars from North Jersey to the heart of New York City, or take any one of a raft of trim new bus lines that speedily came into existence over the new bridge. The George Washington Bridge was, indeed, a sad blow to the Susquehanna passenger traffic, which had attained an average of over three million passengers a year in the late twenties, then dropped steadily until 1936, '37 and '38 saw an average of less than a million a twelvemonth.

In 1937 the Susquehanna ceased operations from Wilkes-Barre and Stroudsburg but continued from the Lehigh & New England, with which it still maintains a busy connection at Hainesburg, N. J., 12 miles east of Stroudsburg. The road's spacious freight terminal at Edgewater, just across the Hudson from 72nd Street, New York, is one of the Susquehanna's best assets. . . . From Hainesburg west the line now has been completely abandoned and the great steel trestle of the Wilkes-Barre & Eastern over Panther Creek in the high Poconos has been taken down and sold for scrap metal.

The Erie was pretty unhappy about its Cinderella. It decided to cast it out, and cast it out it did. The property went into bankruptcy on June 1, 1937. A few days later the federal courts appointed Walter Kidde and H. J. Bordwell, a veteran railroader, as trustees of the road and turned it over to them.

The thing became, quite unexpectedly, Walter Kidde's job. Bordwell died not long after his appointment and Kidde was made the sole trustee. He was not a railroader, but he was a man of attainments, a highly successful construction engineer with the Pulaski Skyway and the eastern approaches to the George Washington Bridge as his two chief triumphs. Almost accidentally, he took on the Susquehanna because Judge William Clark persuaded him it was a public service; and with it he triumphed. He died only in the Spring of the present year—but before that time Cinderella had come to the ball in satin dress and high-heeled slippers.

Kidde saw, almost at the outset, what the matter was with the Susquehanna. Not only did it possess some deadwood in impossible branches, but its awkward terminal situation at Jersey City cost it much potential traffic besides making it difficult to hold its existing business. This last problem he solved by a radical step.

It was the old story of diminishing local passenger traffic, in this case hastened by the bridge situation. The Susquehanna had a good potential territory. It had a direct line into the important industrial city of Paterson; by a short mile-long branch it readily reached into the very heart of that busy town. The Erie long since had abandoned

that little branch and closed what was known as Paterson City Station. One of its officers had reported that it would not be profitable to open again unless it could count upon 400 passengers a day, and that was out of the question. . . . Today, Paterson City Station (reopened by Kidde) is handling over 1200 passengers a day!

Kidde decided that no longer could the Susquehanna passenger business be dependent upon the Erie's Jersey City station and the slow ferry service to the west-side rim of Manhattan. He retained the old terminal for the road's through trains (steam), which were cut off at Butler, 38 miles up the line, and reduced in number from 40 to 20, thus at once effecting a material operating saving.

All of this, although necessary, was destructive. Walter Kidde offset it by doing a very constructive thing:

He purchased two excellent semi-Diesel passenger units, seating 80 passengers each, air-conditioned and very handsome in design and construction. He tore down the dingy old brick station at Paterson City and replaced it with a small but very modern and attractive streamlined structure, not unlike the best of the modern bus stations. . . . He put these passenger units in hourly service between Paterson City and North Bergen, on the west side of the high hill and about three miles out of Jersey. Here another streamlined station was erected and a transfer connection arranged with the Susquehanna's own motor buses in and out of Times Square, New York, through the commodius new Lincoln Tunnel under the Hudson. In rush hours this service has increased until there are now 24 trips a day in each direction between Paterson City and North Bergen (and by connection through to Times Square, New York). Eventually, this service will be further increased. The Susquehanna has ordered a new semi-Diesel passenger unit of two cars, and the railroad plans to motorize its entire passenger service.

Now to translate all this into figures:

In August, 1939, the 10 commuter trains upon the Susquehanna handled 3800 Times Square passengers—barely 150 passengers a day for each of the 27 business days of the month. In June, 1940, this had increased to 5567 passengers for 26 working days. The streamliners went into service July 15, 1940. In the first half-month of their operation they carried over 17,000 passengers; in the first full month, 37,000. By January, 1943, this had risen to 91,600, and it still is rising. The 1942 passenger receipts of the little road were up 150 per cent over those of the low year, 1938.

See these figures reflected in the earnings of the Susquehanna: The net earnings, after all charges except bond interest, in 1938 were but $73,000. By 1939 these had risen to $303,000; the following year they came to $472,000. In 1941 the total was $703,000, and last year it rose to $888,000. Good management, right on the job, and not located hundreds of miles away, was counting for something. The road, despite its excellent waterside terminal, did not particularly benefit by the war boom until late in 1941. It did not enjoy enough through business for that. In fact, it had found it advisable to cut its fleet of 800 ancient and rather obsolete freight cars down to about 400 cars all told. These, however, it has managed to keep busy. Also there is the big coal traffic.

There have been other economies. The Diesel units—operating at 35 cents a mile, as against $1.25 a mile for the steam trains they replaced—alone saved the road $300,000 a year. But the point that the Man in the Tower would like to make is that the Susquehanna was saved not through economies alone—that has been attempted far too often—but by an intelligent attempt to create new business for the road. This attempt has succeeded, even though it has not yet been stretched to its fullest possibilities.

The Towerman often has felt that our railroads have been far too prone to abandon losing branches and passenger services when a little study and drive might restore them to prosperity. There never has been a better opportunity to do the thing than right at this moment, when gas, rubber, and motor-bus shortages are filling the average man with perplexities and are impeding the war effort generally. What has been done so successfully on the Susquehanna might be repeated in many places here and there across the nation. The thing to do with the local train is not to sabotage it, not to give poor equipment, poor schedules and poor connections, but to place it firmly upon its feet, to make it as good a carrier as is humanly possible.

There are many of these Cinderellas in the United States. Many of them might still be saved, turned from liabilities into assets, made of real value to a public which at this very moment stands in dire need of them.

Edward Hungerford

Modern rail car at Susquehanna Transfer, three miles from Jersey City.

Courtesy New York, Susquehanna & Western.

O.R.&N.Co
45

O.R.&N.Co
83

ENGINES OF 1889

ALTHOUGH built by the same company for the same railroad in the same year, the two locomotives pictured on the facing page show striking dissimilarities which indicate that the Oregon Railroad & Navigation Company wasn't so much interested in consistency of appearance and fittings as it was in obtaining power with which to conduct its business.

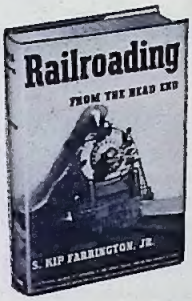
Little is known of these engines except that both were built at Rome, N. Y., in 1889. The Ten-Wheeler, No. 45, was for passenger service, and the Consolidation, No. 83, was used in hauling freight. Notice the differences in boiler design and location of boiler mountings. Even the company's initials were lettered on different panels of their respective cabs. The Ten-Wheeler had a hitch-bar on her pilot and the Consolidation had a bull-nose. Observe, too, the difference in location of the injector feedpipe.

The OR&N appears to have liked the 4-6-0 for freight service, as Cooke built one with 20" x 26" cylinders, 57" drivers, 180-pound boiler pressure and weight of 130,000 pounds. This engine conformed to the practice of the builder except that the cab and tank were of Union Pacific design and there was a bull-nose on the pilot.

Baldwin built a small Mogul for the road many years ago, and, no doubt, other builders were represented in the motive power of the Oregon Railroad & Navigation Company, which is now a part of the Oregon-Washington Railroad & Navigation Company, controlled by the Oregon Short Line and operated under lease by the Union Pacific.

The original OR&N began business July 1, 1879. It was a consolidation of the Oregon Steamship Company, the Oregon Steam Navigation Company, and the companies owning railroads to overcome the rapids of the Columbia River. At its formation the company acquired 67 miles of railway. By the time engines 45 and 83 were built, this mileage had been increased to 1007.79 (December 31, 1889). In 1940, the Oregon-Washington Railroad & Navigation Company owned 1886.97 miles of road, and yards, sidings, and additional main track took this figure to 2481.40. Mileage owned jointly with other companies totaled 2675.96 in 1940.

Data and photos from the collection of the late Arthur Curran.



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— **LUCIUS BEEBE,**
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* * *

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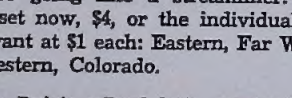

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Correspondence

We often hear nowadays of strikes which occur in large industries, but never remember the important labor disputes which involved the railways. Most railway enthusiasts are not interested in the relations of the lines and labor.

John Arthur Carter, Brooklyn, N. Y.

I understand the D&RGW has purchased two N&W 2-6-6-2's and numbered them 3350 and 3351.

2nd Lt. J. W. Maxwell, U. S. Army, South Pacific.

I imagine the builders of the Yosemite Valley Railroad were more concerned in 1902 with the grade ahead of them rather than the marring of the beauties of the canyon, as in the 14½ miles from El Portal to the park floor, the grade rises 2045 feet.

Don Curran, Los Angeles, Calif.

The statistics and other information in the article on the Yosemite Valley Railway are correct in every detail, and I wish to thank you on behalf of the company.

W. L. White, Vice-President and General Manager, Yosemite Valley Railway Company.

So Chicago goes modern. And San Francisco, time after time, has voted down a subway system.

Pvt. Jim Morley, U. S. Army.

There has never been a railroad which ran through Chicago, and probably there never will be one. But why not, after the war, inaugurate through-Pullman service, with perhaps a day stopover in the Windy City for sightseeing?

Gregory Hicks, Milwaukee, Wis.

About ten years ago I took 175 Boy Scouts on a sightseeing trip of the United States in a train consisting of a baggage car, a diner, two eating and recreation cars, and Pullman equipment, *all* of which made the complete 7000 miles from coast to coast and return.

William S. Wollner, Sausalito, Calif.

I'll wager many people have not seen a gas-electric train doubleheaded by two gas-electric units. I saw this on the Texas & New Orleans the other day.

Elliott Kahn, San Antonio, Tex.

The sight of a lifetime was to be seen along the Milwaukee Road main line between Minneapolis and Great Falls on March 27. The Great Northern and Northern Pacific had suffered washouts in Montana, and trains of both roads were run over Milwaukee trackage for this 1114-mile stretch, or for nearly half the length of their transcontinental runs.

Pfc. H. P. Van Sickle, U. S. Army.

Steam has furnished for years, and will continue to furnish for many more years to come, the most superb power man has ever been privileged to command.

Frank Chapman Leete, Guilford, Conn.

Today my dad and I took a ride on Santa Fe trains 42 and 53. This is the second time I've been on a train.

Gordon Mills, West Los Angeles, Calif.

There is probably no end to names that don't mean anything in the railroad business, but for long and meaningless titles the Minneapolis, St. Paul, Rochester & Dubuque Electric Traction Company should about take the cake. The only one of the four towns named ever reached by this road was Minneapolis.

Navarro Fosse, Decorah, Ia.

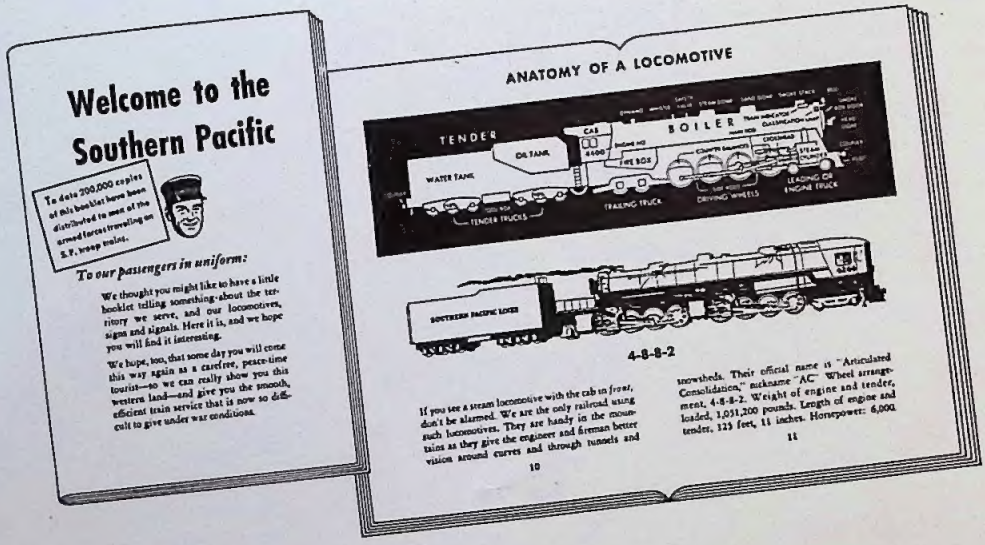
I want to tell you how much I enjoy TRAINS. The war does not seem to have affected its quality at all.

Guy Crias Simpson, Lawrence, Kan.

A couple of weeks after I took some photos in a railroad yard, a pleasant, smooth-looking fellow called on me at my place of business. . . . At the suggestion of the F. B. I., I have shelved my hobby for the duration.

Joseph Burkhart, Omaha, Neb.

A little book about our Trains-*where and how they run*


Welcome to the Southern Pacific
To date 200,000 copies of this booklet have been distributed to men of the armed forces traveling on S.P. troop trains.
To our passengers in uniform:
We thought you might like to have a little booklet telling something about the territory we serve, and our locomotives, signs and signals. Here it is, and we hope you will find it interesting.
We hope, too, that some day you will come this way again as a carefree, peace-time tourist—so we can really show you this western land—and give you the smooth, efficient train service that is now so difficult to give under war conditions.
10
ANATOMY OF A LOCOMOTIVE
TENDER
BOILER
CAB
WATER TANK
OIL TANK
FIRE BOX
TRAILING TRUCK
DRIVING WHEELS
LEADING OR ENGINE TRUCK
TENDER TRUCKS
4-8-8-2
If you see a steam locomotive with the cab in front, don't be alarmed. We are the only railroad using such locomotives. They are handy in the mountains as they give the engineer and fireman better vision around curves and through tunnels and snowsheds. Their official name is "Articulated Consolidation," nickname "AC." Wheel arrangement, 4-8-8-2. Weight of engine and tender, loaded, 1,051,200 pounds. Length of engine and tender, 123 feet, 11 inches. Horsepower: 6,000.
11

Its 20 pages (3½ in. x 5 in. size) are full of railroad information

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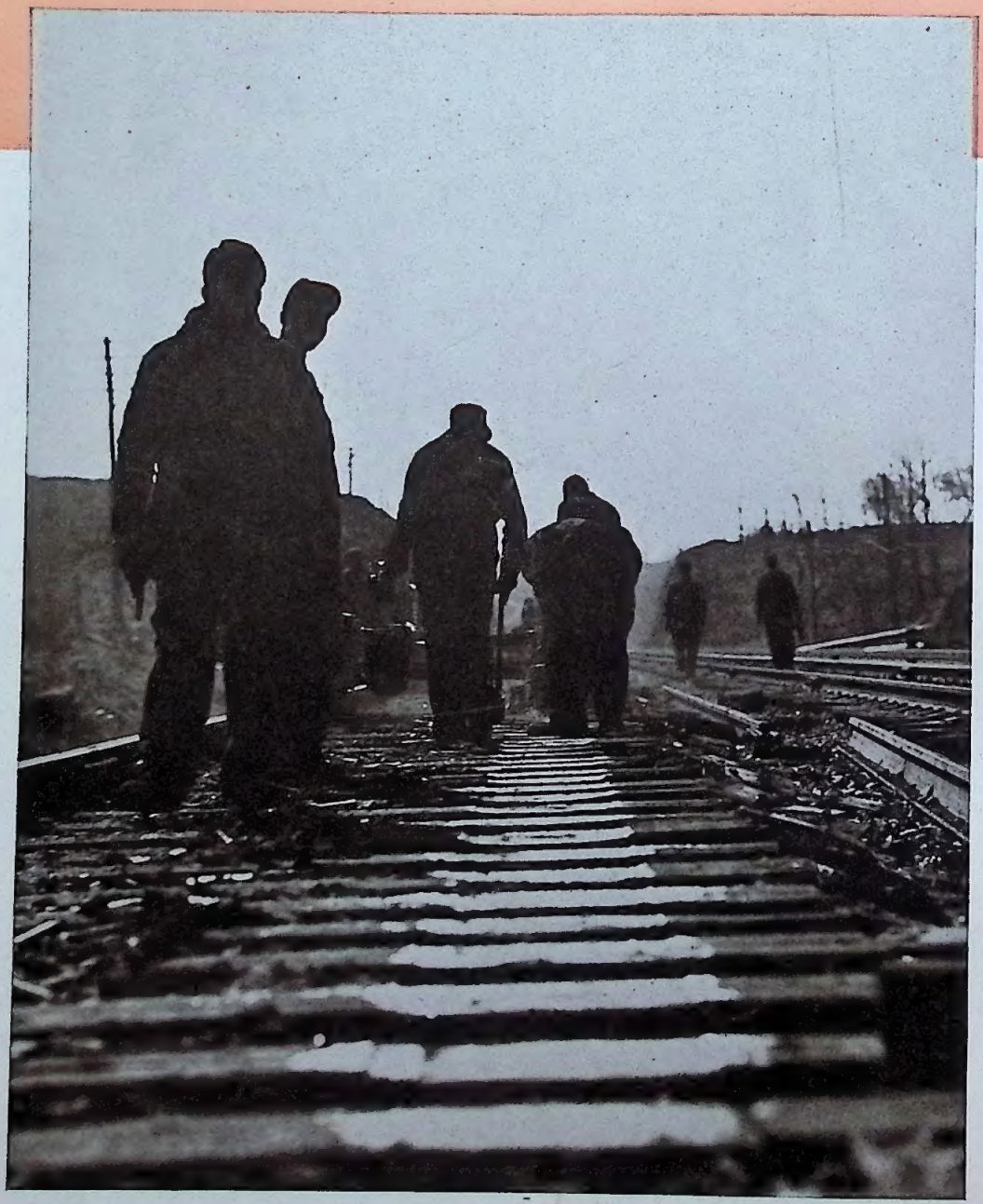
Trains

The Pennsylvania Railroad electric freight train on the front cover is leaving Philadelphia southbound. The locomotive is one of the original P-5 type with six driving wheels. The track gang below is adzing old ties preparatory to spiking down new rail.



Courtesy Norfolk & Western.